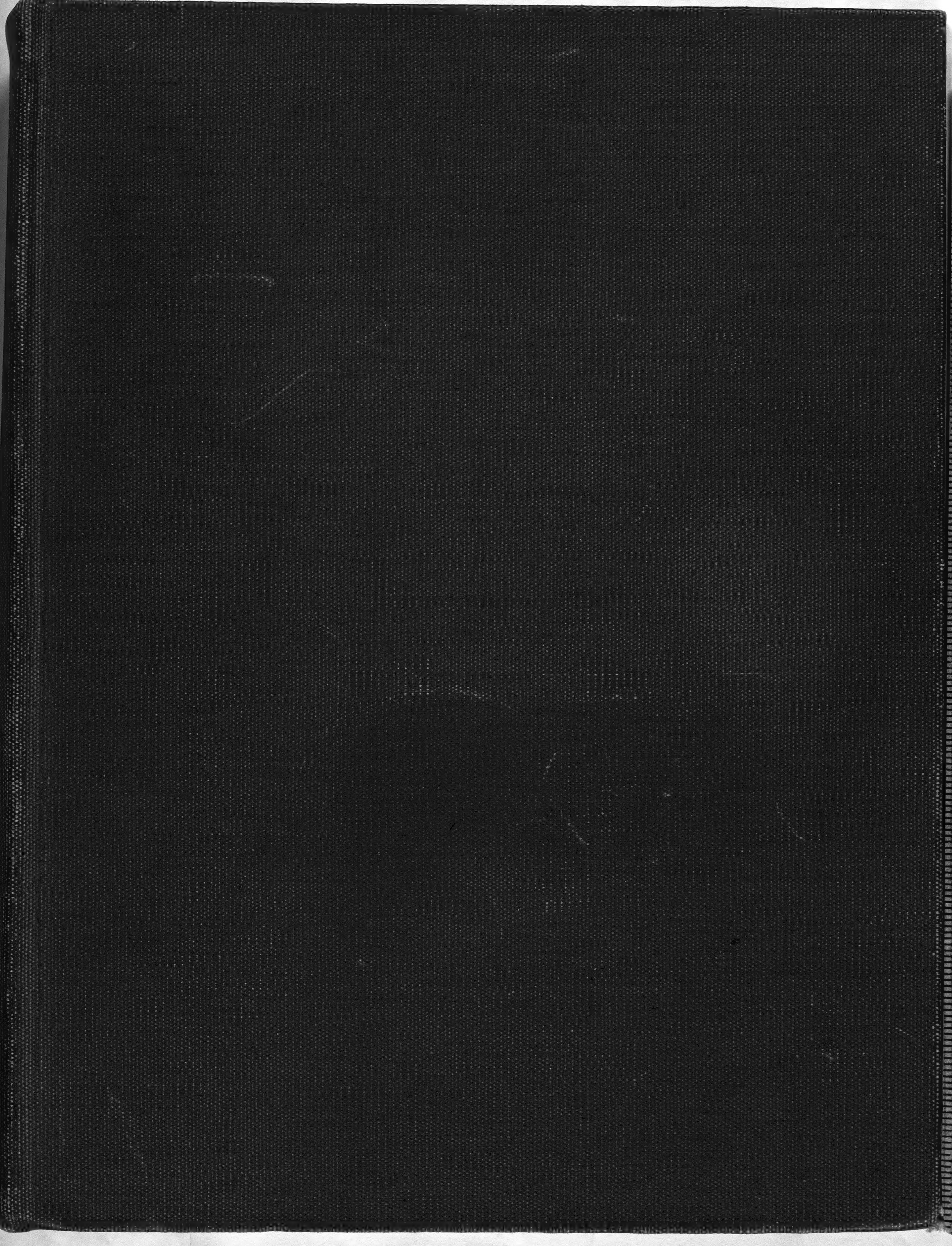
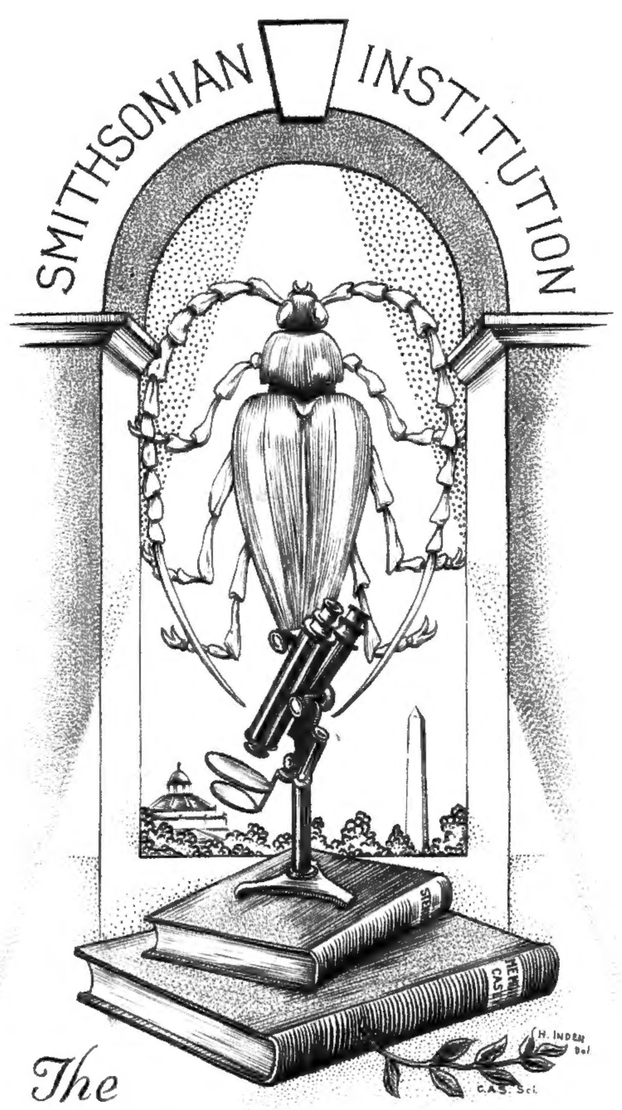

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BIOLOGIA CENTRALI-AMERICANA.

INSECTA.

COLEOPTERA. Vol. I. Part 2.

BY

DAVID SHARP, M.B., F.Z.S., &c.,

PRESIDENT OF THE ENTOMOLOGICAL SOCIETY OF LONDON.

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CONTENTS.

	Page
Introduction	v
List of Plates	xi
Errata	xvi
Haliplidæ	1
Dytiscidæ	3
Gyrinidæ	48
Hydrophilidæ	53
Heteroceridæ	116
Parnidæ	119
Georissidæ	141
Cyathoceridæ	141
Staphylinidæ	145
Supplement	748
Index	803

Plates.

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INTRODUCTION.

THE volume which these lines preface comprises nine families of Coleoptera, and registers as inhabiting Central America 1790 determined species belonging to them, in addition to a few left unnamed for want of sufficient material; of the total number, 1470 are described as new, and 103 new genera are characterized.

The Haliplidæ (the first of the nine families) is a small assemblage of three or four genera, closely allied to the Carabidæ, but aquatic in habits, and presenting no special interest in a faunistic point of view; we have, indeed, only six species belonging to it.

The Dytiscidæ are a much larger family, and we record 168 Central-American species; this may be roughly estimated as about one tenth of the total species known from all parts of the world; they are all aquatic. Our Gyrinidæ amount to 20 species; the number recorded in M. Regimbart's recent monograph of the family being 266 for the whole world.

The Hydrophilidæ have at present 141 Central-American species, the total number of described species of the family being probably under 1000.

The next four families are all of small extent, and have respectively the following number of species:—Heteroceridæ 9, Parnidæ 39, Georissidæ 1, Cyathoceridæ 1. The Parnidæ inhabit, as a rule, small streams; the thirty-nine species of our region comprise no less than seven new genera, and are specially interesting, as giving, for the first time, fair grounds for the belief that the tropical regions of the world possess numerous representatives of this family.

The family Cyathoceridæ, consisting of a single species, is, so far as at present known, peculiar to our region, but will probably be found to inhabit South America also.

The Dytiscidæ and Hydrophilidæ, as mentioned above, consist together of over 300 species. I shall not, however, make any general remarks on these insects, for though this number of species is far from inconsiderable, the two families are but little adapted for consideration in questions of zoo-geography. The Dytiscidæ are apparently subject to different laws of distribution from other Coleoptera, illustrating in this respect what I believe is the case with aquatic organisms generally, viz. diminished endemicity; and though the family Hydrophilidæ is not so purely aquatic as the Dytiscidæ, yet, on the other hand, it is one of the most neglected of all the families of Coleoptera. Moreover there is another reason why water-beetles, though possessing a special interest in certain respects, should be at present omitted in the discussion of faunistic questions, viz. that they require special apparatus to obtain them, and so they are very unequally collected—the collector rarely troubling himself to carry a water-net in addition to his other implements, so that they are frequently passed over and not procured even in spots where they are really numerous.

By far the larger part of the volume is occupied with the great family Staphylinidæ, of which we register 1405 species. In the temperate regions of the world this family is more numerous in species than the Carabidæ, and is about equal in this respect to the Curculionidæ; but it has been hitherto supposed to be less numerous in species in the tropics. There are undoubtedly some tropical regions, especially such as possess an arid climate, that are deficient in Staphylinidæ; but taking the world all over, I believe the family will be found to maintain its supremacy of specific multiplicity without much diminution. Actually, however, statistics would not show this to be the case; for the total number of described species of Staphylinidæ outside the Nearctic and Palæarctic regions cannot at present, I should think, amount to 3000 species. The study of this great family is therefore practically in its infancy, and very little can be done with advantage in the comparison of our Staphylinidæ with those of other regions. The South-American Staphylinidæ are very little known; and the North-American list, though it comprises upwards of 900 species, is very incomplete.

The 1400 species ascertained to exist in the Mexican or (as I think it would be better called) the Central-American subregion can be actually but a small part of its true Staphylinid-fauna, which if exhaustively explored would probably be found to be nearer 4000 than 3000 species. In order to procure the insects composing this family a skilful and persevering collector is absolutely necessary: our Editors were fortunate in securing such a one in the person of Mr. Champion; but for the provinces of our subregion not visited by him our records are comparatively very imperfect. In order

to satisfy myself as to this and some other points, I have divided our subregion into five subdivisions, and then computed the number of species found in each of these subdivisions or provinces, and will now mention the results. The provinces adopted as most convenient for the purposes I had in view are as follows:—(1) North or extra-tropical Mexico, the line of the Tropic of Cancer being taken as its southern limit; (2) Tropical or South Mexico, including Yucatan, from which latter country we have received, however, very few Staphylinidæ; (3) Guatemala, including with it Honduras and British Honduras; (4) Nicaragua and Costa Rica; and (5) Panama—the limit between (4) and (5) being unknown, and perhaps only a question of collecting. I find that we have received from North Mexico 42, from Tropical Mexico 453, from Guatemala 726, from Nicaragua and Costa Rica 157, and from Panama 457 species. I find also that 34 of our species are known to occur in North America, and 97 in South America and the Antilles. I will briefly comment on each of these figures.

The 42 species from North Mexico are mostly new and peculiar to the province, but the number cannot represent more than one tenth of the species that actually exist there; so that we do not possess the data for forming an opinion as to the amount of endemicity of the province. This country is, for several reasons, of peculiar interest; and it is a matter of regret that the difficulties that must necessarily be encountered by a naturalist collecting there are so great that it must be long before even an approximately correct idea can be formed as to the true details of its insect-fauna. It will probably prove poor in Staphylinidæ when compared with our other provinces.

From Tropical or Southern Mexico we have as yet received 453 species of Staphylinidæ. This number is quite inadequate, and is due, no doubt, to the fact that the smaller insects of this family have been neglected by the collectors who have investigated the province. Keeping in view the large extent of South Mexico, and its great variety of surface, climate, and vegetation, it is clear to me that we are not yet acquainted with more than one fourth of its species of Staphylinidæ.

This conclusion is rendered still more certain when we consider the number already found in Guatemala. Although in my table of this province I included the species we have received from Honduras, yet these are so few that our total of 726 species may be treated as being found in political Guatemala, which, notwithstanding its small area, thus appears to be far the richest province of our region in Staphylinidæ; this, I believe, is actually not the case—the present predominance being due to Mr. Champion having been long stationed there, and to his having assiduously collected even the smallest and

most obscure species of its Coleopterous fauna. When we recollect, however, that Staphylinidæ are in warm countries rarely met with, except in the case of a few common species, that their preservation is more difficult than that of most other beetles, and that Mr. Champion could only devote a small portion of his time to them, I feel pretty sure that the total of 726 species for Guatemala is not more than one half of what actually exist there.

From Nicaragua and Costa Rica we have received only 157 species; but these include some very singular forms, and I anticipate that the province contains a larger number of remarkable and beautiful species of the family than any other part of our region.

In Panama Mr. Champion collected for a considerable period; thus the 457 species enumerated probably bear a relation to its true total similar to what I have already suggested in the case of Guatemala.

I have already stated that only 34 of our species are known from North America, and 97 from South America and the Antilles. These figures indicate a much greater alliance of our subregion with the latter than with the former of the two adjoining countries. Both totals are very incomplete, and we shall no doubt ultimately find many species common to Northern Mexico and the southern parts of North America. Scarcely anything is known about the Staphylinidæ of Venezuela, and but little of that of the northern parts of continental Colombia; no doubt many species are common to our subregion and these countries, and I anticipate this alliance will increase more than that between Mexico and North America, because the arid contiguous regions in the latter countries are almost certain to prove naturally poor in this family.

An examination of our indications of locality has shown me that if a table were drawn up to exhibit the number of species peculiar to each of the five provinces I have adopted, it would exhibit for each a large percentage of endemicity; there can be no doubt, however, that this is largely due to imperfect and unequal collecting, and I shall not mention any of the totals obtained, but will give my general impression as to these provinces, as this will be less misleading than the incomplete figures.

That North Mexico will prove to be largely distinct from South Mexico I entertain no doubt; I anticipate, indeed, that it will be found the most distinct of all the divisions of our subregion. But whether my Guatemalan province is in reality suffi-

ciently distinct from that of Southern Mexico is very doubtful, although an inspection of the localities accompanying each species mentioned in the body of the work shows that at present the two are very distinct. For instance, Guatemala has nearly 200 species of Aleocharinæ, while South Mexico has only 60; but this discrepancy loses all importance when we consider that our collections from the two provinces are from different sources. The Aleocharinæ are chiefly minute, obscure insects; and while in Guatemala Mr. Champion collected them with a perseverance and care that cannot be too much admired, in Mexico they have been almost completely neglected by the collectors who accumulated our materials. On the other hand, Guatemala, when compared with Tropical Mexico, appears to be deficient in the larger and more remarkable Staphylinidæ; but then we must recollect that Mr. Champion was only two seasons in Guatemala, while in Mexico several collectors have for many years amassed all they could find of these more attractive and conspicuous forms. I therefore think it extremely probable that more uniform and exhaustive collecting in Tropical Mexico and in Guatemala will show that it would be a natural course to merge these two of my provinces into one.

A similar discrepancy of collecting exists in the case of my two southern provinces, Nicaragua (including Costa Rica) and Panama; and I do not think, taking this into consideration, that the Staphylinidæ need be looked on as offering any impediment to the two provinces being treated as one, of which the northern part is the centre of endemicity.

From the observations I have made I hope it will be perfectly understood that our knowledge of the Central-American Staphylinidæ is still very incomplete; because statistics and tables might be drawn up from them which would give quite a false idea of the relations of its faunistic provinces to one another. To emphasize this imperfection of our knowledge, I may call attention to various anomalies that will be evident to those acquainted with the family and who will make an inspection of our localities; *e. g.* North America and Guatemala have each five species of *Thinobius*, but neither Northern nor Southern Mexico has any representative.

I shall not make any further remark in reference to the distribution of the genera of Staphylinidæ of our subregion, because not only is the imperfect collecting I have alluded to above a barrier to their use, but also because in this difficult family the genera have been much less scrutinized, and can scarcely be looked upon as of equivalent importance with the genera of other families in which the structural characters are much more easily observed. As a result of this it would appear that a large proportion

of our genera have a very wide distribution. On the other hand, I have found it necessary to establish a large number of new genera for our species; and many of these certainly occur in other regions, though the fact of their doing so has not at present been actually ascertained.

I may, however, I think, say that, in the case of genera with a large number of species and a very wide distribution, the forms found in our subregion are much more nearly allied to those of South than they are to those of North America.

I am therefore quite inclined to agree with the opinion expressed by Mr. Bates, after his examination of the Geodephaga and Longicornia, that our subregion is essentially Neotropical. At the same time I very much doubt whether Northern Mexico can be considered to belong to it; and I anticipate that the best line of division between the Nearctic and Neotropical regions will be found, not at the political boundary between Mexico and the United States of North America, but rather somewhere about the line of the Tropic of Cancer, or, more probably, a little to the north thereof.

The Staphylinidæ brought from the tropics previous to the commencement of this work contained a very large proportion of species remarkable for their comparatively large size, bizarre form, or brilliant colours; but it is now clear to me that this is very largely due to imperfect collecting. Indeed, one of the striking facts in connection with the collections of this family that our Editors have brought together with such success, is the very large number of minute and obscure insects contained in them; there are a fair number of large, remarkable, or beautiful forms, but these are few in comparison to the small and inconspicuous species, so that it can scarcely be said that the Central-American Staphylinidæ are on the average larger or more brilliant than those of Europe.

D. S.

November 1887.

LIST OF PLATES.

	Plate.	Fig.	Page.
Haliplidæ.			
Haliplus solitarius	I.	1	2
Dytiscidæ.			
Mesonoterus lævicollis	I.	2	4
Canthydrus simplex	I.	3	5
—— mexicanus	I.	4	6
Bidessus hydrovatoides	I.	5	20, 753
—— germanus	I.	6	20
—— elongatus	I.	7	25
Agabus americanus	I.	8	33
Copelatus terminalis	I.	9	39
—— impressicollis	I.	10	40, 757
Rhantus atricolor	I.	11	42, 758
Thermonectes nigrofasciatus	I.	12	44
Megadytes fallax	I.	13	47
Cybister fimbriolatus	I.	14	48, 759
Gyrinidæ.			
Dineutes truncatus	I.	15	49
Gyretes leionotus	I.	16	51, 761
Hydrophilidæ.			
Hydrophilus insularis	II.	1	54
Tropisternus mexicanus	II.	3	55, 762
—— apicipalpis	II.	2	55
—— brevicollis	II.	4	56
—— ovalis	II.	5	57
—— oculatus	II.	6	58
Pleurhomus obscurus*	II.	7	60, 763
Hydrocharis perfectus	II.	8	61, 764
Oocyclus brevicornis	II.	9	63
Philydrus mexicanus	II.	11	67
Hydrocombus politus	II.	10	72
Sindolus optatus	II.	12	72
Chasmogenus fragilis	II.	13	73
Helochares championi	II.	14	75
Helopeltis larvalis	II.	15	77
Derallus angustus	II.	16	78
Berosus hoplites†	III.	1	765
Hemiosus maculatus	III.	2	85, 767
Epimetopus costatus	III.	3	88
Octhebius crassipes	III.	4	90
Hydræna longicollis	III.	5	93
—— brevis	III.	6	94
Cyclonotum grossulum	III.	7	96
Phænonotum tarsale	III.	8	98
—— rotundulum	III.	9	100, 770
Cyclotypus godmani	III.	10	100
Perochthes globulus	III.	11	102
Cercyon insignis	III.	12	105
—— variegatus	III.	13	107, 771
Pelosoma lafertei	III.	14	109
Nitidulodes jansoni	III.	15	112, 772
Oosternum costatum	III.	16	113, 772
Megasternum strigicolle	IV.	1	113, 772
Deltostethus sulcatus	IV.	2	114
Heteroceridæ.			
Heterocerus debilis	IV.	3	116
—— armatus, ♂	IV.	4	117
Parnidæ.			
Dryops elmoides	IV.	5	121
Disersus longipennis, ♂	IV.	6	127
Hexanchorus gracilipes, ♂	IV.	7	128, 775
Phanocerus clavicornis	IV.	8	129
Cyllœpus optatus	IV.	9	129
Heterelmis obesus	IV.	10	131
Elsianus robustus	IV.	11	132
Elmis championi	IV.	12	134
—— heteroceros‡	IV.	13	135
—— apicalis	IV.	14	136
—— nodipes	IV.	15	138
—— sulcicollis	IV.	16	139
Georissidæ.			
Georissus minor	IV.	17	141
Cyathoceridæ.			
Cyathocerus horni	IV.	18 18*a–d*	144, 775

* *Tropisternus obscurus* on the Plate.

† *Berosus salvini* on the Plate.

‡ *Elmis heterocerus* on the Plate.

	Plate.	Fig.	Page.
STAPHYLINIDÆ.			
Aleochara centralis	V.	1	146
Maseochara opacella	V.	2	154
Oxypoda microps	V.	3	161
—— palpalis	V.	4	162
Phlœopora alticola	V.	5	165
Tinotus cavicollis	V.	6	170
Philotermes laxicornis	V.	7	171
Homalota consors	V.	8	172
—— terminicornis	V.	9	183
—— flavicauda	V.	10	189
—— championi	V.	11	192
—— godmani	V.	12	193
—— trisignata	V.	13	194
—— prolixa	V.	14	195
Leptonia picta	V.	15	196
Thamiaræa salvini	V.	16	197
Myrmedonia flavicornis	V.	17	200
—— lævior	V.	18	204
—— godmani	V.	19	206
—— longipes	V.	20	207
—— mimula	V.	21	209
Orphnebius lativentris	V.	22	210
Sceptobius dispar, ♂	V.	23	212
Falagonia mexicana	V.	24	213
Platonica sallæi	V.	25	215
—— latifrons	VI.	1	217
Hoplandria gemina, ♂	VI.	2	219
—— rufa	VI.	3	221
Charoxus fodiens	VI.	4	225
Rechota impressa	VI.	5	229
Meronera fragilis *	VI.	6	230
Neolara centralis	VI.	7	231
Chitalia granigera	VI.	8	236
Stenagria gracilipes	VI.	9	238
—— paræ	VI.	10	240
Epipeda rufa	VI.	11	240
—— reyi	VI.	12	246
Gyrophæna gracilicornis	VI.	13	264
Brachychara crassa	VI.	14	267
Placusa longicornis	VI.	15	272
—— crassula	VI.	16	273
Silusa opacella	VI.	17	277
—— gracilis	VI.	18	277
Euvira godmani	VI.	19	280
Gansia bicolor	VI.	20	283
Tachiona deplanata	VI.	21	284
Bamona gracilis	VI.	22	288, 781
Saphoglossa pictipennis	VI.	23	291
Barychara filicornis	VI.	24	292
Deinopsis ferruginea	VI.	25	294
Cephaloplectus godmani	VII.	1, 1A, B	297
Erchomus politulus	VII.	2	298
—— distans	VII.	3	299
Erchomus tachyporinus	VII.	4	299
—— glabripennis	VII.	5	300
—— sinuatus	VII.	6	302
—— ignavus	VII.	7	305
—— gravidus	VII.	8	306
Tachinoderus grandis	VII.	9	308
Tachinus meridionalis	VII.	10	309
—— inornatus	VII.	11	310
Tachyporus mexicanus	VII.	12	311
—— argutus	VII.	13	312
Conosoma gravidum	VII.	14	313
—— ornatum	VII.	15	315
Bolitobius festivus	VII.	16	316
—— obliquus	VII.	17	317
Megacronus nigerrimus	VII.	18	318
—— meridionalis, var.	VII.	19	319
Mycetoporus coxalis	VII.	20	320
Tanygnathus antennalis	VII.	21	321
—— vilis	VII.	22	322
Heterothops remota	VII.	23	323
—— orbicularis	VII.	24	324
Acylophorus didymus	VII.	25	325
—— palpalis	VIII.	1	327
Mimosticus viridipennis	VIII.	2	328
Quedius læticulus	VIII.	3	329
—— championi	VIII.	4	329
—— basiventris	VIII.	5	330
—— jocosus	VIII.	6	331
—— arrogans	VIII.	7	333
Quedionuchus nigerrimus	VIII.	8	338
Quediomacrus puniceipennis	VIII.	9	339
Cyrtothorax cyanescens	VIII.	10	341
—— salvini	VIII.	11	341, 783
Cordylaspis pilosa, var.	VIII.	12	342
Tympanophorus concolor	VIII.	13	343, 784
Selma modesta	VIII.	14	343
Xanthopygus puncticollis	VIII.	15	345
—— rufipennis	VIII.	16	346
Lampropygus cognatus	VIII.	17	347
—— analis	VIII.	18	348
Brachydirus divisus	VIII.	19	349
—— fungicola	VIII.	20	351
Plociopterus collaris	VIII.	21	352
—— variegatus	VIII.	22	353
Philothalpus difficilis	VIII.	23	355
—— prolixus	VIII.	24	357
—— philonthiformis	VIII.	25	358
—— pæderiformis	IX.	1	359
Gastrisus opaculus	IX.	2	359
Isanopus sallæi	IX.	3	360
Styngetus viduus, var.	IX.	4	361
—— anticus	IX.	5	362
Ocyolinus amethystinus	IX.	6	363
Phanolinus flohri	IX.	7	364
—— godmani	IX.	8	366

* *Merona fragilis* on the Plate.

	Plate.	Fig.	Page.
Phanolinus speciosus	IX.	9	367
—— discedens	IX.	10	368
Nausicotus spectabilis	IX.	11	369
Glenus flohri, var.	IX.	12	369
Staphylinus ferox (wing)	IX.	14	372
—— atrox (wing)	IX.	15	372
—— fulvo-maculatus	IX.	13, 13*a*	373
—— vittatus	IX.	16	374
—— maculiventris	IX.	17	375
—— angusticeps	IX.	18	376
—— fervidus	IX.	19	377
—— championi	IX.	20	382
—— modestus	IX.	21	383
—— salvinianus	IX.	22	385
—— belti	IX.	23	387
—— gracilipes	IX.	24	388
—— insolitus	IX.	25	389
Amichorus fauveli	IX.	26	390
Flohria laticornis	IX.	27	392
Onthostygnus fasciatus	X.	1	392
Misantlius optatus	X.	2	394
—— carinulatus	X.	3	394
Philonthus crassulus	XI.	1	396
—— abnormalis	XI.	2	397
—— palmatus	X.	4	397
—— sallæi	X.	5	398
—— alticola	X.	7	400
—— högei	X.	6	400
—— piceatus, var.	X.	8	400
—— ——, var.	X.	9	400
—— ——, var.	X.	10	400
—— iris	X.	11	401
—— atriceps	X.	12	404
—— parvimanus	X.	14	406
—— ochromerus	X.	13	406
—— mollis	X.	15	408
—— quadraticollis	X.	16	409
—— lætipennis	X.	17	409
—— fulgipennis	X.	18	410
—— rufopygus	X.	19	411
—— platypterus	XI.	3	412
—— godmani	X.	20	413
—— infimus	XI.	4	414
—— latecinctus	XI.	5	415
—— trochanterinus	XI.	6	417
—— alternans	XI.	7	418
—— serpens	X.	21	422
—— tachiniformis	X.	22	425
—— rectilaterus	X.	23	425
—— discretus	X.	24	427
—— championi	X.	25	427
Belonuchus cognatus	XI.	9	429
—— alternatus	XI.	10	430
—— bidens	XI.	11	430
Belonuchus erythropterus	XI.	13	432, 789
—— viridipennis *	XI.	12	433, 789
—— mimeticus	XI.	14	436
—— similis	XI.	15	436
Chroaptomus regalis	XI.	8	438
Pæderomimus gentilis	XI.	17	439
—— salvini	XI.	18	440
—— hilaris	XI.	19	441
—— nobilis	XI.	20	442
—— pectoralis	XI.	16	443
—— difformiceps	XI.	23	445
—— nigripennis	XI.	22	446
—— insolitus	XI.	21	447
—— cribratus †	XI.	24	450
—— corrosus	XI.	25	451
Linoderus gracilipes	XII.	2	452
Pescolinus palmatus	XII.	3	453
Odontolinus fasciatus	XII.	4	454
Musicoderus cephalotes	XII.	5	455
Pæderallus fragilis	XII.	1	457
Actobius nitidulus	XII.	6	460
—— delicatulus	XII.	7	461
—— alternans	XII.	8	461
Holisus prolixus	XII.	9	463
—— oblitus	XII.	10	465
—— elatus	XII.	11	465
Diochus inornatus	XII.	12	466
Agrodes longicornis	XII.	13	467
Sterculia humeralis	XII.	14	469
Plochionocerus brachypterus	XII.	15	471
Homalolinus canaliculatus	XII.	17	472
—— apicalis	XII.	18	474
Heterolinus puncticeps	XII.	19	475
Tesba belti	XII.	16	475
Xantholinus nigriceps	XII.	20	476
—— rudis	XII.	21	477
—— humilis	XII.	22	481
—— æneotinctus	XII.	23	484
Allotrichus arenarius	XII.	24	486
Hymeneus godmani	XIII.	1	487
—— cephalotes	XIII.	2	488
Leptacinus grandiceps	XIII.	5	490
Lithocharodes fuscipennis	XIII.	6	492
Somoleptus ænescens	XIII.	8	495
—— agræformis	XIII.	7	498
Thyreocephalus salvini	XIII.	3	499
—— rufipennis	XIII.	4	500
Nudobius celatus	XII.	25	502
Metoponcus longiceps	XIII.	10	504
—— varians	XIII.	9	504
—— holisoides	XIII.	11	505
Cryptobium collare	XIII.	12	507, 792
—— speculator	XIII.	13	511
—— æquale	XIII.	15	513, 793
—— mixtum	XIII.	14	515

* *Belonuchus dejectus* on the Plate.

† *Pæderomimus cribricollis* on the Plate.

	Plate.	Fig.	Page.
Cryptobium nasutum	XIII.	16	526
—— nigriventre	XIII.	21	526
—— centrale	XIII.	20	528
—— brevipenne	XIII.	17	529
—— ducale	XIII.	18	531
—— grande	XIII.	19	532
—— rostratum	XIII.	22	532
Ababactus depressus	XIII.	23	534
—— gracilis	XIII.	24	535
—— politus	XIII.	25	536, 794
Lathrobium mexicanum	XIV.	1	537
Scopæomerus chiriquensis	XIV.	2	539
Scopæus salvini	XIV.	4	543
—— dissimilis	XIV.	5	544
—— antoniensis	XIV.	6	545
—— politus	XIV.	8	546
—— apicipennis	XIV.	7	547
Euscopæus gracilicornis	XIV.	9	548
Orus guatemalenus	XIV.	3	549
Lithocharis hilaris	XIV.	11	551
Aderocharis latro	XIV.	10	552
Dacnochilus lætus	XIV.	12	554
Acalophæna angularis	XIV.	13	555
Lithocaon sparsus	XIV.	14	555
Neomedon princeps	XIV.	15	557
Mespalerus flavipennis	XIV.	16	560
Scioporus fulvescens	XIV.	17	562
—— signatus	XIV.	18	562
—— latifrons	XIV.	19	564
Stilomedon triseriatus	XIV.	20	565
Ophiomedon stipes	XIV.	21	567
Monocharis vestita	XIV.	22	569
Sciocharis arribalzagæ	XIV.	23	570
—— boops	XIV.	24	574
Eusclerus rugifrons	XIV.	25	576
Stilocharis longula	XV.	1	577
Deroderus vestitus	XV.	2	577
—— difficilis	XV.	3	578
Eustilicus crassidens	XV.	4	579
Trochoderus godmani	XV.	5	581
Stilicus angularis	XV.	6	581
—— cribratus	XV.	7	582
—— muticus	XV.	8	585
Suniocharis modesta	XV.	9	586
Suniotrichus capillaris	XV.	10	588
Monista concolor	XV.	11	589
—— picturata	XV.	12	591
Echiaster filum	XV.	13	592
—— championi	XV.	14	593
—— lativentris	XV.	15	594
Zonaster optatus	XV.	16	595
Sunius longinasus	XV.	17	596
—— pilatei	XV.	18	599
—— tenuis	XV.	19	600
Dibelonetes biplagiatus	XV.	20	602
—— laticeps	XV.	21	603
—— tristigma	XV.	22	605

	Plate.	Fig.	Page.
Stilicopsis brevis	XV.	23	607
Stamnoderus championi	XV.	24	607
—— godmani	XV.	25	608
Pæderus alticola	XVI.	1	609
—— luridiventris	XVI.	2	610
—— lætipes	XVI.	3	611
—— signaticornis	XVI.	4	613
—— lætus	XVI.	5	613
—— yucateca	XVI.	6	614
—— columbinus	XVI.	7	617
—— apicalis	XVI.	8	617
Tænodema stigmaticum	XVI.	9	618
—— ornatum	XVI.	10	619
—— hæmorrhoidale	XVI.	11	619
—— tibiale	XVI.	12	620
Pinophilus albipes	XVI.	13	621
—— penetrans	XVI.	14	624
—— agilis	XVI.	16	626
—— longicornis	XVI.	15	627
Lathropinus parallelus	XVI.	17	628
Heteroleucus marginatus	XVI.	18	629
Œdodactylus fauveli	XVI.	19	630
Palaminus lacertinus	XVI.	20	631
—— concolor	XVI.	21	635, 798
—— rubripennis	XVI.	22	635
—— apicipennis	XVI.	23	636
—— deformis	XVI.	24	637
—— vittatus	XVI.	25	639, 798
Edaphus euplectoides	XVII.	1	640
Stenus renifer	XVII.	2	641
—— championi	XVII.	3	642
—— graciliventris, ♀	XVII.	4	643
—— repletus, ♂	XVII.	5	646
—— fauvelianus, ♀	XVII.	6	646
—— nasutus, ♂	XVII.	7	648
—— trochanterinus, ♂	XVII.	8	649
—— consimilis	XVII.	9	651
—— docilis	XVII.	10	653
—— gentilis	XVII.	11	657
—— salvini	XVII.	12	659
—— aculeatus, ♂	XVII.	14	661
—— godmani	XVII.	13	662, 799
—— cribriceps	XVII.	15	662
—— sagax	XVII.	16	665
—— podagricus	XVII.	17	667
Megalops cruciger, ♂	XVII.	18	668
—— integer	XVII.	19	671
—— elegans	XVII.	20	672
—— præditus	XVII.	21	672
—— guatemalenus	XVII.	22	673
—— basalis	XVII.	23	674
—— peploides	XVII.	24	675
—— puncticeps	XVII.	25	676
Oxyporus mexicanus	XVIII.	1	677
—— flohri	XVIII.	2	677
Osorius canaliculatus	XVIII.	3	678
—— mundus	XVIII.	4	681

	Plate.	Fig.	Page.		Plate.	Fig.	Page.
Holotrochus rufopygus	XVIII.	5	683	Zirophorus planatus	XIX.	3	711
—— marginatus	XVIII.	6	684	—— furcatus	XIX.	4	712
Bledius lecontei	XVIII.	7	685	Piestus mexicanus	XIX.	5	714
—— inornatus	XVIII.	8	685, 800	—— crassicornis	XIX.	6	716
Platystethus spiculus	XVIII.	9	687, 800	Ancæus crassicornis	XIX.	7	716
Oxytelus principalis, ♂	XVIII.	10	688	Lispinus longicornis	XIX.	8	722
—— strigosulus	XVIII.	12	690	—— planellus	XIX.	9	722
—— spinifrons, ♂	XVIII.	11	691	Glyptoma læviceps	XIX.	10	723
Apocellus sphæricollis	XVIII.	13	694	—— hirticorne	XIX.	11	724
—— cognatus	XVIII.	14	695	Aneucamptus excisicollis	XIX.	12	725
—— sordidus	XVIII.	15	697	Thoracophorus sallæi	XIX.	13	725
Trogophlœus planellus	XVIII.	16	698	—— discretus	XIX.	14	727
—— punctipennis	XVIII.	17	701	Eleusis bicolor, var. divisa	XIX.	16	729
—— mollis	XVIII.	18	702	—— corvina	XIX.	17	730
—— vittatus	XVIII.	19	702	—— scita	XIX.	18	731
Trogactus funebris	XVIII.	20	703	—— insignis	XIX.	19	732
—— godmani	XVIII.	21	703	Eumalus strigosus	XIX.	20	733
Parosus hilaris	XIX.	1	704	—— nigriceps	XIX.	21	733
Thinobius tenuis	XVIII.	22	705	Leptochirus molossus	XIX.	22	735
Sciotrogus opacus	XVIII.	23	707	Priochirus divergens	XIX.	23	742
Ecbletus simplex	XVIII.	24	708	Megarthrus zunilensis	XIX.	15	743
Charhyphus brevicollis	XVIII.	25	709	Omalium læticulum	XIX.	24	747
Hypotelus marginatus	XIX.	2	711	Micropeplus acumen	XIX.	25	747

ERRATA.

Page	Line	
87	27	*for* GUATEMALA *read* NICARAGUA
199	39	for *H.* read *M.*
201	1	for *flavicollis* read *flavicornis*
237	11	for *F.* read *C.*
273	35	for *discrepens* read *discrepans*
278	4	for *Ocala* read *Ocalea*
295	35	*for* I will call *read* I call
401	12	*for* Calpulalpam *read* Capulalpam
417	29	for *B. validus* read *B. pollens*
438	12	for *P.* read *C.*
507	15	*for* Yantepec *read* Yautepec
512	23	
526	7	*for* Tlalcotalpam *read* Tlacotalpam
544	27	*for* XVI. *read* XIV.
619	19	for *mexicana* read *mexicanum*
746	6	for *A.* read *O.*
761	8	for **leinotus** read **leionotus**
768	6	*for* 85 *read* 88
800	29	*for* 678 *read* 687

ZOOLOGIA.

Class INSECTA.

Order COLEOPTERA.

Tribe ADEPHAGA (*continued*).

Fam. HALIPLIDÆ.

This family at present consists of about fifty species of aquatic carnivorous Coleoptera, and is probably as well represented in the northern and temperate as it is in the tropical regions. It is of wide distribution; but only one or two species are yet known from South America, while, on the other hand, North America has furnished a considerable proportion of the forms at present extant in our collections.

CNEMIDOTUS.

Cnemidotus, Illiger, Mag. Ins. i. p. 373 (1802).

This is a small genus of about eight species, but has a wide extension in the northern hemisphere, from Europe to Japan and China on the one side, and to North America, east and west, on the other.

1. Cnemidotus simplex.

Cnemidotus simplex, Lec. Ann. Lyc. N. Y. v. p. 201[1].

Hab. NORTH AMERICA, San Diego[1].—MEXICO, Guanajuato (*Dugès, coll. Sallé*), Jalapa and Oaxaca (*Höge*).

The Mexican individuals depart considerably from Californian specimens, being much narrower and with less coarse sculpture; the Guanajuato specimens, however, differ considerably from the large series found by Höge, and approach more nearly to the Californian individuals; so that the superficial characters above mentioned, unaccompanied as they are by any structural distinctions, do not warrant us in treating the Mexican individuals as a species distinct from that of California.

HALIPLUS.

Haliplus, Latreille, Gen. Crust. et Ins. i. p. 234 (1806).

This genus has an even wider geographical extension than has *Cnemidotus*, and, unlike it, is represented in South America as well as North.

1. **Haliplus solitarius.** (Tab. I. fig. 1.)

Ovalis, brevis, convexus, rufo-testaceus, prothorace longitudinaliter in medio nigro, elytris ex parte majore nigris, versus latera testaceo-variegatis; prothorace absque plicula laterali; elytris fortiter seriatim punctatis; coxarum laminis dense fortiterque punctatis.

Long. $1\frac{1}{2}$ lin.

Hab. GUATEMALA, city, 5000 feet (*Champion*).

This comes nearer to the North-American *H. punctatus* than to any other described species; but it is abundantly distinct by its much shorter form, less dense sculpture, and the greater extension of the black markings of the upper surface. The thorax is neither densely nor sparingly punctured; and the black mark on the middle extends the whole length. The external series of punctures on the elytra are much coarser than those of the three or four series near the suture. The prominent middle portion of the prosternum is rough and coarsely punctate; and its lateral margins are directed outwards rather than upwards, the middle being not at all raised.

The unique individual described is a male. The front tarsi are not incrassate; but the four basal joints bear each at the apex beneath a minute tuft of setæ.

2. **Haliplus signatus.**

Ovalis, brevis, convexus, testaceus, prothorace elytrisque fusco-signatis; illo crebre punctato, absque plicula laterali, his fortiter seriatim punctatis; coxarum laminis sat crebre et sat fortiter punctatis.

Long. $1\frac{1}{2}$ lin.

Hab. GUATEMALA, Dueñas (*Champion*).

Thorax short, closely punctate, but transversely along the middle almost without punctures; on the front margin there is in the middle a transverse fuscous cloud; and there is also at the base on each side a very indistinct fuscous mark. The elytra have very definite and distinct series of punctures, even those near the suture being deep and distinct, and those nearer the sides are very coarse; along the whole length of the suture they have a fuscous or dilute black irregular mark, and more externally some isolated marks of similar colour. The punctures on the coxæ are not dense, but are rather coarse. The margins of the prominent middle portion of the prosternum are much raised; and this part, moreover, is longitudinally convex along the middle.

The unique individual described is no doubt a female.

3. **Haliplus robustus.**

Haliplus robustus, Sharp, Ann. Soc. Ent. Belg. xx. p. 120.

Hab. PANAMA, David (*Champion*).—ANTILLES, Antigua.

Fam. DYTISCIDÆ.

This is a family of moderate extent, comprising at present about 1200 species arranged in about eighty genera. The species are, without exception, thoroughly aquatic in their habits, and, except when on the wing, are rarely found out of their peculiar element. Hence special means of collecting are required for the Dytiscidæ, and it is probable that the species of the family are comparatively less completely known than their very closely allied terrestrial neighbours the Carabidæ. The arrangement here adopted is that suggested by the writer in the Transactions of the Royal Dublin Society (new series), vol. ii. (1882).

Series DYTISCI FRAGMENTATI.

NOTOMICRUS.

Notomicrus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 833 (1882).

These excessively minute insects form a small genus, of which at present only four species have been described, two from South America and two from Australia.

1. Notomicrus gracilipes.

Ovalis, angustulus, subdepressus, pernitidus, elytris crebre subtiliter punctatis, ad basin lævigatis; testaceus, vertice pectoreque fuscis.
Long. $\frac{3}{4}$ lin.

Hab. GUATEMALA, Paraiso, 300 feet (*Champion*).

The posterior portion of the head is dark, but the colour in front is more dilute and rufescent; the prothorax is clear yellow; the elytra are of a more obscure or livid pale yellow, and are narrowly infuscate along the suture; the surface also appears dark along the joint between the thorax and wing-cases: these latter have a very fine but distinct punctuation; the punctures are not dense, and are quite wanting on the basal portion, and at the extreme apex they are obsolete. The breast is infuscate. The upper surface, except for the punctuation of the wing-cases, is very smooth and shining; but the under surface is duller, although without punctuation. The posterior tarsi are extremely slender and very elongate, considerably longer than the tibiæ.

The male has the three basal joints of the anterior tarsi distinctly incrassate.

The species is distinct from the Amazonian *N. traili* by its smaller size, by the less dense and fine punctuation on the wing-cases, and rather shorter antennæ. It varies somewhat as to the extension and distinctness of the infuscate portions of the surface.

2. Notomicrus politus.

Ovalis, angustulus, subdepressus, pernitidus, lævigatus; tarsis posterioribus tenuissimis, quam tibiæ longioribus.
Long. $\frac{5}{8}$ lin.

Hab. GUATEMALA, Paraiso, 300 feet, and Paso Antonio, 400 feet (*Champion*).

This little mite is readily distinguished from *N. gracilipes* by the polished upper surface, quite destitute of punctuation on the wing-cases, as well as by the more uniform colour. It appears also to be slightly smaller, and to have the antennæ a little shorter. It is extremely similar to the Australian *N. lævigatus*, but is of more depressed form, and, moreover, is considerably smaller.

MESONOTERUS.

Pronotero quoad faciem similis, inter eum et *Noterum* quoad pedes anteriores locandus. Caput magnum; antennæ mediocres, articulis intermediis secundum sexum plus minusve leviter incrassatis; palpi labiales articulo ultimo valde dilatato, minute emarginato; mentum in medio angustissime denticulatum; prosterni processus planus, subovalis; coxarum posteriorum laminis internis elevatis, apicibus acuminatis, parum prolongatis, angulis absque setis; acetabula inter se perparum distantia. Tibiæ anteriores graciles, angulo externo obsoleto, brevissime ciliato, ad apicem calcari tenui sed sat elongato, parum curvato, armatæ. Pedes natatorii fere graciles, femoribus apice externo rotundato, haud penicillato, tibiis intus densissime, extus parcius ciliatis, calcaribus elongatis tenuissimis, tarsis omnino gracilibus, quam tibiæ paulo longioribus.

The insect for which this genus is proposed has quite the appearance of the South-American *Pronoterus*, and connects that genus quite evidently with the Noterini. *Mesonoterus* differs from it, however, by the lighter structure of the front legs, which resemble those of *Noterus* in form, but are more slender; and the swimming-legs also are more slender and less powerful. Although there is no pencil of setæ at the extremity of the hind femora, there are yet two or three very fine elongate hairs.

1. **Mesonoterus lævicollis.** (Tab. I. fig. 2.)

Ovalis, transverse sat convexus, postice acuminatus, testaceus, elytris livide brunneis, irregulariter sat crebre et sat fortiter punctatis, punctis suturam versus desinentibus.

Long. $1\frac{1}{4}$ lin.

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*).

Antennæ about as long as head and thorax, with the intermediate joints broader than the basal and the two apical joints. Head rather elongate, without sculpture, shining. Thorax strongly transverse, almost entirely without punctuation, the punctures near the front margin being obsolete. Elytra of darker colour and less shining than the head and thorax, with numerous irregularly scattered rather large punctures, which are wanting along the suture. Under surface almost impunctate, there being a few fine punctures on the middle portion of the metasternum, and still fewer on the elevated laminæ of the hind coxæ; the lateral portions of the metasternum, hind coxæ, and ventral segments are dull and finely coriaceous.

The male has the antennæ broader than the female, and the basal joint of the front and middle tarsi greatly incrassate. The female has the last ventral segment at the extremity folded and compressed so as to form a very prominent plica; in each sex the apex of the body appears mucronate, owing to the projection of the œdeagus or of the ovipositor.

SUPHIS.

Suphis, Aubé, Ic. Col. Eur. v. p. 208.

This genus, at present, is only known by three species from South America and the Antilles.

1. **Suphis difformis,** var.

Suphis difformis, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 268, t. ix. fig. 113.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).—South America, from the Orinoco to Bahia.

The Central-American specimens differ a little from the type in that they have the joints of the antennæ less elongate; but they agree in this with an individual from Santa Rita, Brazil. I have not been able to distinguish the sexes. All the individuals have the basal joint of the front foot very large.

CANTHYDRUS.

Canthydrus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 838 (1882).

The species of this genus are numerous, forty or fifty being at present known; and they occur in all the warmer parts of the two hemispheres, with the exception of some of the Pacific islands.

1. **Canthydrus simplex.** (Tab. I. fig. 3.)

Subrotundatus, convexus, nitidus, testaceus, elytris castaneis, obsolete punctatis; prosterni processu longitudinaliter depresso; coxarum laminis parce punctatis.

Long. 1 lin.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).

This little insect is no doubt closely allied to the Brazilian *C. rotundatus*, with which I am unfortunately unable to compare it. No serial punctures can be detected on the wing-cases. The central elevated portion of the metasternum is more densely and coarsely punctate than are the coxal laminæ; the latter at their common suture behind are a good deal depressed, and the coxal cavities are slightly separated.

The male has the basal joint of the front and middle tarsi more incrassate than it is in the female.

2. **Canthydrus varians.**

Breviter ovalis, convexus, nitidus, prothorace antice in medio elytrisque fuscis, his testaceo-signatis, crebre fortiterque punctatis; coxarum laminis parce punctatis.

Long. $\frac{3}{16}$ poll.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).

The colour of the elytra is sometimes nearly black, sometimes more dilute; the

yellow marks on them are also variable; the external margin is yellow, and has connected with it about the middle a more or less obsolete small mark; at the base between the suture and the shoulder there is a stripe extending about half the length of the wing-case, and just behind the middle, nearer the suture, an indistinct short vitta: these markings, however, are sometimes much reduced in size. The punctuation of the elytra is rather deep and distinct, but is somewhat variable in these respects; no serial punctures can be detected. The prosternal process is not canaliculate. The male has the basal joint of the front and middle tarsi a good deal incrassate; the female has the extremity of the last ventral plate obscurely plicate in the middle.

3. **Canthydrus subsignatus.**

Canthydrus subsignatus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 271.

Hab. Panama.

This is very closely allied to *C. varians*, but is larger and broader, and the structure of the last ventral segment in the female (the only sex known) appears to be different.

4. **Canthydrus centralis.**

Canthydrus centralis, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 274.

Hab. Guatemala, San Gerónimo, Guatemala city, 5000 feet (*Champion*).

5. **Canthydrus majusculus.**

Ovalis, latiusculus, testaceus, elytris sordidis, superne in thorace et in elytris fortiter irregulariter punctatus; coxarum laminis externis parum coriaceis, internis fortiter punctatis.

Long. $1\frac{3}{4}$, lat. 1 lin.

Hab. Panama, David (*Champion*).

This species is of larger size than any other yet known of the genus, and this, in combination with the distinctly punctate upper surface, permits its easy identification. The prosternal process is depressed along the middle, and the raised coxal laminæ and middle of the metasternum are very closely punctate; on the other hand, the sides of the breast are almost smooth. The swimming-legs are rather thicker than usual in the genus. The two individuals before me are probably males; the apical ventral segment is quite without impressions. The terminal five joints of the antennæ are a little irregular, the seventh joint being distinctly longer than either of the following three, while the eighth and tenth are each distinctly smaller than the adjacent joints.

6. **Canthydrus mexicanus.** (Tab. I. fig. 4.)

Hydrocanthus lineatus, Wehncke, Berl. Zeit. xx. p. 221.

Hab. Mexico, Cordova (*Sallé*), Oaxaca (*Höge*).

This is very closely allied to *C. centralis*, but is larger and of brighter colour, the

thorax being without infuscation, and the reddish-yellow vittæ on the wing-cases broader. As *Suphis lineatus*, Horn, belongs to this genus, it has been necessary to change the name given by Wehncke.

7. **Canthydrus rufipes.**

Canthydrus rufipes, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 273.

Hab. Guatemala, Dueñas and Paso Antonio (*Champion*); Nicaragua, Chontales (*Janson*); Panama, David (*Champion*).—South America, Amazon valley; Cuba.

HYDROCANTHUS.

Hydrocanthus, Say, Tr. Am. Phil. Soc. ii. p. 105 (1825); Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 839.

The species known of this genus are about twelve in number, and are found in the warmer parts of the eastern and western hemispheres. The genus is one most difficult to deal with, on account of the extreme resemblance of the species to one another, and the absence of well-marked or readily appreciated external characters. Material for dealing in a thoroughly satisfactory manner with the Central-American forms is not at present to be obtained; and I have thus been able to determine only with doubt three of the species here mentioned. There is in the collection a specimen of *H. indicus*, labelled "Guatem.;" but I think this individual cannot really be from Central America, and have therefore not admitted it into the list of species here given.

1. **Hydrocanthus lævigatus.**

Noterus lævigatus, Brullé, Voy. d'Orb. Col. p. 50.

Hydrocanthus lævigatus, Aubé, Sp. Gén. vi. p. 406; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 280.

Hab. Panama, David (*Champion*).—South America, Bahia, Orinoco.

The individuals from Panama are probably really conspecific with the South-American specimens.

2. **Hydrocanthus texanus.**

Hydrocanthus texanus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 280.

Hab. North America, Texas.—Mexico, Oaxaca (*Höge*), Guanajuato (*Dugès, coll. Sallé*).

It is doubtful whether the Mexican individuals from these two localities are conspecific with the North-American specimens, or even with one another; in the absence of material that would allow the sexes to be certainly recognized, this must remain undecided.

3. **Hydrocanthus atripennis.**

Hydrocanthus atripennis, Say, Trans. Am. Phil. Soc. iv. p. 447[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 280.

Hab. Mexico[1].—Brazil, Santa Rita, and Boa Sorta.

I have not been able with certainty to identify Say's species; and it must remain at present doubtful whether I am correct in assigning to it the specimens from Brazil I have been able to examine.

4. **Hydrocanthus debilis.**

Hydrocanthus debilis, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 281.

Hab. MEXICO, Oaxaca (*Höge*); GUATEMALA, Paso Antonio, 400 feet (*Champion*); PANAMA, David (*Champion*).—SOUTH AMERICA, Bahia.

The individuals from Central America appear to be really conspecific with specimens from Bahia in my collection.

5. **Hydrocanthus marmoratus.**

Ovalis, sat convexus, pernitidus, testaceus, elytris castaneis, transversim testaceo undulatis.
Long. 2 lin.

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*).

In the male the prosternal process is a little hollowed, and is nearly impunctate, there being only obsolete traces of punctuation on each side; the middle of the prosternum in front of the coxæ is closely and finely punctate; the last ventral plate has at the apex in the middle a small oblong dull space. In the female the prosternal process and the space in front of it are quite impunctate and polished, and the ventral plate is without the dull patch.

The species is extremely similar to *H. debilis*, but is considerably larger, and the distinctions between the sexes are quite different.

MACROVATELLUS.

Macrovatellus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 840 (1882).

The species of this genus are seven in number, and are, so far as we yet know, restricted to the eastern portions of South and Central America, extending from Uruguay to Mexico.

1. **Macrovatellus mexicanus.**

Macrovatellus mexicanus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 284.

Hab. MEXICO, Puebla (*Sallé*).

The female of this species differs from the male by the very slender front and middle tarsi, and the absence of the pubescence on the middle femora; in other respects it is similar. The third joint of the front tarsus in this sex is elongate and slender—when seen beneath, about three times as long as broad.

LACCOPHILUS.

Laccophilus, Leach, Zool. Miscell. iii. p. 69 (1817); Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 841.

This is an extensive genus, widely distributed in the warmer and temperate regions of the two hemispheres. The Central-American species are numerous; and I have arranged them in conformity with the groups tabled in my memoir on the Dytiscidæ. Thus the first eleven species belong to group 1; the next three species, *L. oscillator*, *L. lævipennis*, and *L. duplex*, to group 2; while *L. optatus* goes into group 5. *Laccophilus championi* and *L. suavis* are peculiar, inasmuch as they possess a coxal file and an elongate prosternal process, a combination not before found in the genus; as, however, the coxal file is rudimentary, consisting of only a few coarse and indistinct rugæ, I think it is of comparatively little importance in the case of these insects, which, from their other characters, may be placed in group 5.

1. **Laccophilus mistecus.**

Ovalis, latus, sat convexus, parum nitidus, testaceus, elytris crebre fusco-irroratis, ad marginem lateralem et ad apicem pallidis; pectore nigro, abdomine piceo.

Long. $2\frac{5}{8}$, lat. $1\frac{3}{4}$ lin.

Hab. MEXICO, Parada (*Boucard, coll. Sallé*).

In the male the last ventral plate is much truncate at the extremity, and the middle of the hind margin forms a small but distinctly prominent lobe. In the female the upper surface is a little duller than it is in the male, owing to its being finely alutaceous; the apical ventral segment in this sex is nearly simple, and the coxal file is extremely fine.

The species is allied to *L. mexicanus*, but is broader, and the fuscous irrorations on the wing-cases are not so dense, the male has the last ventral segment more truncate, and the female has the upper surface distinctly alutaceous.

2. **Laccophilus mexicanus.**

Laccophilus mexicanus, Aubé, Spec. Gén. vi. p. 420.

Laccophilus atristernalis, Crotch, Trans. Am. Ent. Soc. iv. p. 418; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 292.

Hab. CALIFORNIA.—MEXICO, Oaxaca and Jalapa (*Höge*), Guanajuato (*Dugès, coll. Sallé*), Cordova (*Sallé*).

This appears to be the most abundant species of the Mexican Dytiscidæ. It varies considerably in size and width, and a little in colour, in certain individuals; the ventral segments are nearly yellow; and occasionally the pale spot at the apex of the wing-cases, caused by the absence there of the fuscous irrorations, is very inconspicuous. There can, I think, be no doubt now that Aubé's description (*loc. cit.*) refers to this insect; and I have therefore adopted his name for it.

3. **Laccophilus spergatus.**

Ovalis, sat convexus, elongatus, testaceus, elytris crebre fere æqualiter fusco-irroratis, haud maculatis, margine laterali pallido; pectore nigro.
Long. vix 3, lat. vix $1\frac{3}{4}$ lin.

Hab. MEXICO, Toluca (*Sallé*).

I have seen only the female of this species. It is closely allied to *L. mexicanus* and *L. mistecus*, but readily distinguished from the corresponding sex in each of those species by the strongly truncate last ventral segment; the hind margin of this segment is, moreover, a little sinuate on each side, so that it projects a little in the middle; there is an excessively fine coxal file, which no doubt is more evident in the male; the surface is not so distinctly alutaceous as in the corresponding sex of *L. mistecus*. The minute fuscous irrorations on the elytra are very evenly distributed, and leave no trace of spots; they are scarcely less numerous even at the apex than elsewhere.

4. **Laccophilus salvini.**

Laccophilus salvini, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 291.

Hab. GUATEMALA, near the city, 5000 feet (*Salvin*), Guatemala city, Dueñas, San Gerónimo (*Champion*).

5. **Laccophilus apicalis.**

Laccophilus apicalis, Sharp, Ent. Mo. Mag. x. p. 53; Trans. Roy. Dubl. Soc. n. s. ii. p. 291.

Hab. MEXICO, Oaxaca, Jalapa (*Höge*), Vera Cruz (*Sallé*); GUATEMALA, San Gerónimo, 3000 feet, Paso Antonio, 400 feet (*Champion*); NICARAGUA, Chontales (*Belt*).

6. **Laccophilus decipiens.**

Laccophilus decipiens, Lec. Ann. Lyc. N. York, v. p. 205; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 289.

Laccophilus truncatus, Mann, Bull. Mosc. 1853, iii. p. 160[1].

Hab. NORTH AMERICA, California, Utah, "Russian America"[1].—MEXICO, Guanajuato (*Dugès, coll. Sallé*).

7. **Laccophilus fuscipennis.**

Ovalis, sat convexus, sat nitidus, testaceus, elytris crebrius fusco-irroratis, apice margineque laterali pallidis, absque maculis basalibus.
Long. $2\frac{1}{4}$ lin.

Hab. MEXICO, Oaxaca (*Höge*).

Head and thorax yellow, approaching to orange; elytra closely irrorated with dark specks, so as to assume a dark fuscous appearance; these specks are absent from, or less numerous at, the apex and the lateral margins, which are therefore paler; a little before the middle the pale lateral colour extends inwards, giving rise to the appearance of a spot; and behind this the fuscous colour extends nearly or quite to the lateral margin;

the surface of the wing-cases is not polished, and is a little less shining in the female than it is in the male. The under surface is yellow. The male possesses a rather coarse coxal file; but I do not detect any trace of a file in the female. In the latter sex the epipleura is broadly dilated a little before the extremity, the dilatation being almost as remarkable above as it is when the under surface is looked at. In each sex the apical abdominal segment is nearly without truncation or sinuation. Apart from the structure of the epipleura in the female, the species may be distinguished from *L. americanus* and the allies which resemble it in size and in the pale breast, by the complete absence of any pale spots near the base of the wing-cases.

8. **Laccophilus terminalis.**

Laccophilus terminalis, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 292.

Hab. North America, Texas.—Mexico, Guanajuato (*Dugès, coll. Sallé*).

9. **Laccophilus americanus.**

Laccophilus americanus, Aubé, Spec. Gén. vi. p. 422; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 291.

Hab. North America, Texas, Louisiana, Albania.—Mexico.—Antilles, Antigua, Cuba.

10. **Laccophilus confusus.**

Laccophilus confusus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 292.

Hab. Mexico, Vera Cruz (*Sallé*).

The female of this species has a quite distinct coxal file. The species is very near to *L. americanus*, and may perhaps prove not to be a good one; but at present material is insufficient to decide the question.

11. **Laccophilus pictus.**

Laccophilus pictus, Cast. Et. Ent. p. 104; Aubé, Spec. Gén. vi. p. 441; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 290.

Hab. Mexico, Puebla, Teapa (*Sallé*), Oaxaca, Paso del Macho (*Höge*); Guatemala, Guatemala city and San Gerónimo (*Champion*).

12. **Laccophilus oscillator.**

Ovalis, latus, subdepressus, nitidus, testaceus; elytris fuscis, fascia subbasali disintegrata, maculis gracilibus ultra medium apiceque testaceis; abdomine pectoreque fusco-testaceis.

Long. $2\frac{1}{4}$ lin.

Hab. Mexico, Oaxaca (*Höge*).

The subbasal fascia extends from the shoulder to the suture, but is broken into three spots, the two internal spots being nearly connected, however, by means of a vague curved mark quite at the base; behind the middle are some elongate very slender pale

marks, forming the remains, as it were, of a very irregular fascia; and there is another pale mark at the extremity; the fuscous colour of the wing-cases is not occasioned by irrorations, but is diffused. Beneath, the breast and ventral segments are yellow, but much clouded with black. The wing-cases, although shining, have a quite distinct though very fine reticulation. The male is quite without coxal file, and the front and middle tarsi are only very slightly incrassate; the apical ventral segment is neither sinuate nor truncate, but is provided towards the hind margin, except in the middle, with distinct elongate punctures. The female is unknown.

The species, although not closely allied to any other, is best placed before *L. bifasciatus*, Chev.

13. **Laccophilus lævipennis.**

Ovalis, haud latus, nitidus, politus, testaceus, elytris fuscis, fascia subbasali disintegrata, maculis gracilibus ultra medium apiceque testaceis; abdomine pectoreque infuscatis.

Long. $1\frac{7}{8}$ lin.

Hab. GUATEMALA, San Joaquin, Guatemala city, 5000 feet (*Champion*).

This species is very closely allied to *L. oscillator*, the markings of the two being in fact almost exactly similar, but is smaller and narrower, and the elytra are polished and destitute of the fine reticulation seen in *L. oscillator*; the thorax, however, is minutely reticulate. I have seen only two individuals, in bad condition; they appear to be males, and to be distinguished by the same external characters as *L. oscillator*.

14. **Laccophilus duplex.**

Ovalis, parum elongatus et parum convexus, pernitidus, testaceus; elytris fuscis, testaceo variegatis, fascia subbasali flammulata conspicua.

Long. $1\frac{3}{4}$–2, lat. 1–$1\frac{1}{8}$ lin.

Hab. MEXICO, Oaxaca (*Höge*).

This species belongs to the group without coxal file, and with the prosternal process not elongate; in *L. duplex* it is of moderate length. The subbasal fascia on the wing-cases is scarcely interrupted at the suture, and is nearly entire, although its outline behind is very irregular; there is an indistinct pale spot on the side about the middle; and the apex is pale. The male has the front and middle tarsi very little incrassate; the terminal ventral segment is not truncate, and is scarcely sinuate on each side, but it is not quite so long as it is in the female; it bears on the apical portion numerous elongate punctures; and its surface is more impressed on the left side than it is on the right. The female has this segment entire; and it is punctate, as in the male, except that the punctures are considerably more obsolete; the margin of the coxa close to the epipleura is longitudinally impressed.

The species is extremely similar to the Brazilian *L. fumatus* (of which only the female is known); but the form is less elongate, and in the Brazilian species the

terminal ventral segment of the female bears only an indistinct longitudinal series of punctures on each side of the middle. It differs from *L. lævipennis* by the narrower form and different colour, by the hind tarsi being broader and shorter, and by the last ventral segment in the male being more elongate, and much more acuminate in the middle behind.

15. **Laccophilus optatus.**

Breviter ovalis, sat convexus, pernitidus, testaceus, elytris fusco-piceis, testaceo variegatis, fascia subbasali flammulata conspicua.

Long. $1\frac{3}{4}$–$1\frac{7}{8}$, lat. 1–$1\frac{1}{4}$ lin.

Hab. NICARAGUA, Chontales (*Janson*).

This species has the prosternal process elongate, and the male without any trace of coxal file, and may therefore be placed at the commencement of group 5. The male only is known to me; it has the apical ventral segment without truncation or sinuation, and impressed on the left side (in the natural position) of the middle, and the apical portion of its surface rather closely covered with elongate punctuation; the front and middle tarsi are very slightly incrassate. The yellow fascia near the base of the wing-cases extends from the shoulder to very near the suture; the portion near the suture, however, is a little isolated from the rest of the band by a slight interruption of the darker colour; there are also a yellow mark on the lateral margin about the middle and a very imperfect band of pale marks some distance in front of the apex, the apex itself being also pale. The resemblance to its nearest ally, *L. latifrons*, is very considerable so far as colour is concerned; but the form is much broader, the surface is more shining, and the male characters are different.

16. **Laccophilus suavis.**

Laccophilus venustus, var.?, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 296.

Ovalis, angustulus, sat convexus, nitidus, politus, testaceus, elytris castaneis, fascia lata subbasali, altera abbreviata pone medium interdumque macula laterali testaceis; prosterni processu apice elongato; abdomine parum strigoso.

Long. $1\frac{3}{4}$ lin.

Hab. MEXICO, Cordova (*Sallé*).

A rather narrow, somewhat convex, shining insect, with the head and thorax yellow, the latter somewhat clouded with brown on the front and hind margins in the middle; the elytra are of a chestnut-brown colour, with a broad transverse fascia near the base yellow, and beyond the middle with a much shorter irregular fascia not nearly reaching the suture; this latter band or spot appears to be variable; and there is sometimes a spot of yellow colour on the side margin about the middle. The under surface is clear yellow; the ventral segments only obscurely strigose. The male has the tarsi scarcely incrassate, and has a very obscure coxal file consisting only of five or

six coarse, short rugæ. The form of the hind margin of the last ventral segment differs very little in the two sexes, it being distinctly but not greatly truncate, and projecting very little in the middle, so that there is scarcely any sinuation.

17. **Laccophilus championi.**

Ovalis, angustulus, convexus, pernitidus, politus, testaceus, prothorace antice et postice in medio elytrisque nigro-fuscis, his fascia lata subbasali, macula laterali in medio, fasciaque abbreviata postmediali testaceis; prosterni processu apice elongato; abdomine substrigoso.
Long. $1\frac{1}{2}$, lat. 1 lin.)

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*).

The surface in this elegant little species is highly polished, and has no trace of reticulation; the basal fascia of the wing-cases is very conspicuous, and has its margins waved or angulate, it does not quite touch the suture on each side; the marginal pale spot is large and distinct; the postmedial fascia is far from reaching the suture, and is more or less broken into spots.

The individuals before me are all males. The tarsi are only very slightly incrassate; and there is a very obscure coxal file consisting of four or five short, coarse, but not deep rugæ; the hind margin of the last ventral plate is but little truncate, and is scarcely sinuate at the side.

18. **Laccophilus ovatus.**

Laccophilus ovatus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 303.

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*).—BRAZIL, Santa Cruz, Bahia.

The Central-American specimens differ a little from the Brazilian individuals, inasmuch as they are a little smaller, and have no postmedial pale band; but as the sexual characters seem to be quite the same; and as the pale bands in these species are evidently subject to a good deal of variation, it is probable that they are but one species.

Series DYTISCI COMPLICATI.

HYDROVATUS.

Hydrovatus, Motsch. Et. Ent. 1855, p. 82; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 848 (1882).
Oxynoptilus, Schaum, Nat. Ins. Deutsch. i. 2, p. 28 (1868).

This is an extensive genus of obscure species, well represented in most of the continental regions of the two hemispheres, though apparently South America is poorer in species than most other parts of the world; indeed both the Antilles and North America appear at present to have more species of the genus than has the whole of South America.

1. **Hydrovatus obscurus.**

Brevissimus, convexus, nitidus, sordide testaceus, elytris versus apicem impunctatis, circa humeros sat crebre vix fortiter punctatis; coxis posticis fortiter punctatis.

Long. $1\frac{1}{8}$, lat. $\frac{3}{4}$ lin.

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*); PANAMA, David (*Champion*).

This obscure little insect is allied to *Hydrovatus brevipes*, but can be readily distinguished by the impunctate apical portion of the elytra. The specimens before me all have the surface shining; and I cannot assure myself of any distinct differences in their tarsi: but certain of them have the punctuation about the shoulders rather coarser and closer; and these, I believe, are the females. If this be the case, the species is remarkable from the fact that the surface is as shining in the female as it is in the other sex. The punctuation of the basal portion of the elytra is rather coarser and deeper in the two individuals from Chiriqui.

2. **Hydrovatus inornatus.**

(*Fem.*) Brevissimus, latus, sat convexus, sordide testaceus, opacus, sparsim subtilissimeque punctatus; coxis posticis fortiter profundeque punctatis.

Long. $1\frac{1}{4}$, lat. $\frac{7}{8}$ lin.

Hab. MEXICO, Oaxaca (*Höge*).

This species is remarkable from the extremely fine punctuation of the upper surface. The unique individual is no doubt a female; for it has the front and middle tarsi very narrrow; the antennæ are rather slender, but distinctly serrate. It is probable the upper surface may be more shining in the male. It may be placed near *H. brevipes* and *H. compressus*, although, in respect of the obsolete punctuation, it is more nearly approached by *H. clypealis*.

3. **Hydrovatus lecontei.**

***Hydroporus leconteii*, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 175[1].**

Hab. MEXICO[1].

Mr. Fry informs me that the type of this, as well as of most of the other Mexican Hydroporides described from his collection by the late Hamlet Clark, was unfortunately lost by the describer previous to his decease. It is doubtful from the description whether a *Cœlambus* or a *Hydrovatus* is its subject; but I think the latter the more probable supposition.

4. **Hydrovatus major.**

***Hydrovatus major*, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 335.**

Hab. GUATEMALA, Dueñas (*Champion*).

PACHYDRUS.

Pachydrus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 850.
Hyphidrus (ex parte), Aubé, Spec. Gén. vi. p. 450.

This genus is restricted to Tropical America and the Antilles. At present only six species are known.

1. **Pachydrus cribratus.**

Pachydrus cribratus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 338[1].

Hab. Mexico[1], Guadelupe.

2. **Pachydrus politus.**

Ovalis, convexus, nitidus, testaceo-ferrugineus, capite postice, abdominis segmentis ultimis elytrisque fuscis; his plaga laterali pone humerum testacea, subtiliter (versus suturam obsolete, versus latera distinctius) punctatis.
Long. 2, lat. $1\frac{1}{4}$ lin.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).

Var. Paulo latior, colore obscuriore, punctatura (præsertim in thorace) minus obsoleta.

Hab. Mexico, Vera Cruz (*Sallé*).

The head is somewhat finely but quite distinctly punctured, the thorax very sparingly and obsoletely. The wing-cases have, in addition to the yellow posthumeral mark, the apex minutely pale. The body beneath is shining and impunctate, except that the sides of the breast are somewhat obsoletely but yet rather coarsely punctate. I am not able to detect any external sexual characters.

The Mexican variety may possibly prove to be a distinct species; but if so, it must be an extremely closely allied one; it probably approaches closely the Cuban *Hyphydrus obniger*, Chev.

DESMOPACHRIA.

Desmopachria, Bab. Trans. Ent. Soc. Lond. iii. 1841, p. 16; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 851.

About twelve species are known of this genus; they are all minute insects, confined, so far as we know, to the continental portions of the New World, where they range from Uruguay to the United States of North America. Certain species supposed to occur both in Brazil and North America have not yet been detected in the intervening Central-American regions.

1. **Desmopachria variegata.**

Brevis, lata, subrotundata, nitida, rufo-testacea, capite obscuriore, prothorace basi in medio abdomineque segmentis tribus ultimis nigricantibus; elytris testaceis, signatura lata irregulari circa suturam nigro-

fusca; prothorace basi elytrisque versus suturam crebre subtiliter punctatis; corpore subtus lævigato, impunctato.

Long. $1\frac{1}{8}$, lat. $\frac{7}{8}$ lin.

Hab. MEXICO, Cordova (*Höge*); GUATEMALA, San Gerónimo (*Champion*).

The head is sparingly and quite finely punctured; the clypeal margin is very distinct. The punctuation on the wing-cases is quite distinct and definite about the suture, but disappears entirely at the lateral margins. The species is allied to *D. lævis*, Sharp; and, as in that insect, the prosternal process takes two different forms according to the sex; the individuals with the process furcate are, I believe, the males.

2. **Desmopachria dispar.**

Brevis, lata, subrotundata, nitida, capite thoraceque fusco-rufis, hoc lateribus dilutioribus, elytris testaceis dorso fusco suffusis, antennis pedibusque testaceis, abdomine pectoreque nigris; prothorace subtiliter punctato, in medio fere lævigato; elytris crebre subtiliter punctatis, punctis versus latera obsoletis; corpore subtus lævigato, impunctato.

Long. $1\frac{1}{8}$, lat. $\frac{7}{8}$ lin.

Hab. MEXICO, Cordova and Jalapa (*Höge*), Guanajuato (*Dugès, coll. Sallé*).

The head is finely but quite distinctly punctate, broadly truncate in front, with the clypeal margin very distinct, especially in the middle; the prothorax is finely punctulate; but the punctures on the middle are very fine indeed; the punctuation of the wing-cases is fine, but distinct, and becomes altogether obsolete at the sides; there is an indistinct sutural impression which can scarcely be called a stria.

Although very closely allied to *D. variegata*, this is, no doubt, a distinct species; the colour is less bright, the punctuation a little different, the head more broadly truncate in front, and the colour of the under surface is black. The prosternal process assumes two forms, as in *D. variegata*.

3. **Desmopachria portmanni.**

Hydroporus portmanni, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 174.

Hab. MEXICO (*Truqui*).

The type of this species in Mr. Fry's collection is a *Desmopachria* allied to *D. dispar*, but black beneath; the coxæ are impunctate.

4. **Desmopachria polita.**

Brevis, lata, subrotundata, pernitida, fusco-testacea, antennis pedibusque anticis testaceis, pedibus posticis rufis, pectore abdomineque nigris, hoc apice rufescente; corpore fere impunctato, superne tantum sparsim obsoleteque punctato.

Long. $\frac{7}{8}$, lat. $\frac{3}{4}$ lin.

Hab. MEXICO, Cordova (*Höge*).

The head is nearly rounded in front, being only very obscurely truncate in the

middle; and the clypeal margin is fine. The species is apparently closely allied to *D. lævis*, Sharp, but is more than twice the size, and the upper surface is not so completely impunctate. I have seen but a single individual, which, from the form of the prosternal process, I consider to be a female.

5. **Desmopachria bryanstoni.**

Hydroporus bryanstonii, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 175[1].

Hab. Mexico[1] (*Truqui*).

Clark's description indicates a species distinct from any known to me. I formerly identified specimens from Bahia as being this species; but in this I see I was wrong, for Clark describes his species as being black beneath, whereas the Brazilian individuals are entirely pale beneath. Under these circumstances a fresh name must be given to the species described by me (Trans. Roy. Dubl. Soc. n. s. ii. p. 342. no. 238) under the name of *Hydroporus bryanstoni*; and I will take this opportunity of naming it *D. mutata*.

6. **Desmopachria circularis.**

Brevis, lata, subrotundata, pernitida, testacea, supra subglabra, elytris tantum obsolete punctulatis, versus latera omnino lævigata.
Long. $\frac{3}{4}$, lat. $\frac{9}{16}$ lin.

Hab. Guatemala, Guatemala city, San Gerónimo (*Champion*).

Var. Paulo minor, supra vix adeo obsolete punctulata.
Long. $\frac{5}{8}$, lat. $\frac{1}{2}$ lin.

Hab. Mexico, Vera Cruz (*Sallé*).

This species is extremely similar to *D. lævis*, Sharp, but has the under surface pale, not black, and the upper surface is not so completely destitute of punctuation. The under surface at first sight appears smooth; but on careful examination a very few distant and obsolete punctures may be detected on the coxæ. The elytra show a more or less distinct series of punctures along the middle on the basal portion.

The variety from Mexico may possibly prove to be a distinct species; but as it approaches very closely to the Guatemalan specimens, and these vary a little *inter se*, it would be premature to treat the only individual I have seen as sufficient evidence of specific division.

The prosternal process is extremely minute, and, I think, presents but one form in the four individuals before me.

7. **Desmopachria glabricula.**

Brevis, lata, rotundata, convexa, pernitida, testacea, fere lævigata, elytris vix perspicue punctatis.
Long. $\frac{5}{8}$, lat. vix $\frac{1}{2}$ lin.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).

This is the most minute species yet discovered of this genus. It is closely allied to the small and smooth variety of *Hydroporus granum*, Lec., found in South America; but it is readily distinguished by the impunctate upper surface; with a strong lens, however, traces of obsolete punctuation may be seen on the wing-cases.

8. **Desmopachria mexicana.**

Latissima, brevis, nitida, sine pubescentia, crebre sat fortiter punctata, ferruginea, abdominis apice protho-raceque infuscatis, hoc transversim in medio dilutiore, antennis, pedibus elytrisque testaceis, his nigro signatis; clypeo acute marginato; prothorace utrinque plica curvata; coxis posterioribus sat fortiter punctatis.

Long. $1\frac{1}{8}$, lat. $\frac{3}{4}$ lin.

Hab. MEXICO, Guanajuato (*Dugès, coll. Sallé*).

This species is very similar to *Hydroporus latissimus*, Lec., but is entirely destitute of the lateral foveæ of the wing-cases, and shows numerous other less important distinctions. It is also very similar to *D. variegata* and *D. dispar*, but is readily distinguished by the prothoracic impression and the punctate coxæ. The head is almost impunctate; but the punctures on the thorax are numerous and distinct, although fine. The punctuation of the elytra is rather close, but not coarse, and is absent at the side margins. The punctures on the hind coxæ are not dense, and, though quite distinct, are not very coarse. The dark marks on the wing-cases cover a large portion of their area in an irregular manner, leaving, however, the sides and apex pale; in addition to the larger mark, there is a small isolated one on each side some distance behind the shoulder. The hind tarsi are infuscate. I do not know the sex of the unique individual described.

BIDESSUS.

Bidessus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 852 (1882).
Hydroporus (ex parte), Aubé, Spec. Gén. vi. p. 468.

The small insects of which this genus consists are numerous in species, and are found in most of the warmer parts of the world. About 100 species are known at present.

1. **Bidessus discedens.**

Ovalis, postice acuminatus, subtus convexus, glaber, nitidulus, testaceo-ferrugineus; elytris secundum suturam nigro signatis et fortiter punctatis, ad latera lævigatis, basi in medio plica profunda, sat elongata; capite in medio distincte marginato.

Long. $1\frac{1}{4}$, lat. $\frac{3}{4}$ lin.

Hab. MEXICO.

Head reddish yellow, very shining impunctate, distinctly margined in front in the middle. Thorax yellowish, with a longitudinal infuscation on the middle, a very distinct plica at the base on each side of the middle; the surface shining, but little

punctate. Elytra yellow, but blackish about the suture, the black colour extending laterally so as to form a very irregular marking occupying about half the area; the punctuation is coarse and very distinct, but becomes quite obsolete before the sides are reached; the punctures do not, however, reach the suture, but a narrow impunctate space is left there, and thus some appearance of a sutural stria is given; the basal impression or plica is very distinct, and is about as long as the length of the thorax along the middle. The under surface is shining, and the impression behind the middle coxal cavity deep; across the hind coxa there is a patch of coarse punctuation; and there are also two series of coarse punctures on the first abdominal segment.

This peculiar little species I obtained from the collection of the late Mr. Aspinal Turner, of Manchester. I cannot indicate any near ally for it; it has the breast more elongate than the *Hydroporus pictodes* allies, and perhaps on the whole had better be placed for a while in group 1 (Sharp) of the genus.

2. **Bidessus hydrovatoides.** (Tab. I. fig. 5.)

Brevior, ovalis, convexus, postice acuminatus, sine pubescentia, testaceo-ferrugineus; prothorace obsolete punctulato, basi utrinque striola subtili; elytris crebre subtiliter, coxis posticis sparsim subobsolete punctatis.

Long. $\frac{3}{4}$, lat. vix $\frac{1}{2}$ lin.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).

This is one of the peculiar species forming group 2 of my memoir. It is closely allied to *Hydroporus apicatus*, but is smaller, and the posterior portion of the body much less elongate. As in the other species of the group, the third, fourth, and fifth joints of the antennæ are considerably smaller than the others, the third being quite small, though perceptibly larger than the fourth; the sixth to the tenth joints are slightly serrate internally; and the terminal joint is acuminate with oblique apex. The resemblance in the form of the head and antennæ to the species forming the genus *Hydrovatus* is considerable. I am not able to detect any external sexual characters.

3. **Bidessus apicatus.**

Hydroporus apicatus, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 184[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 346[2].

Hab. Mexico, Teapa[1].—San Domingo[2].

Although Clark's description is very short, I do not think his species will prove to be the same as that I have just described as *B. hydrovatoides*, although no doubt it is closely allied thereto.

4. **Bidessus germanus.** (Tab. I. fig. 6.)

Brevis, latiusculus, sine pubescentia, rufo-testaceus, elytris fusco-umbrosis; prothorace brevi, fere impunctato,

lateribus parum distincte rugulosis, basi in medio profunde transversim depresso; elytris dense fortiter punctatis, crista elongata elevata; corpore subtus punctis magnis, coxis grosse punctatis.

Long. vix $\frac{7}{8}$, lat. $\frac{1}{2}$ lin.

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*).

This species is no doubt very closely allied to the North-American *Hydroporus exiguus*; but, although I have no opportunity of comparing the two, I believe it will be found that the present insect is rather smaller, and rather more coarsely and less closely punctate on the elytra.

5. **Bidessus quadrisignatus.**

Ovalis, parum elongatus, convexus, nitidus, sine pubescentia, subtus piceus, supra nigricans, thorace transversim in medio, elytris maculis quatuor magnis, antennarum basi pedibusque testaceis; elytris crebre fortiter punctatis; clypeo in medio marginato.

Long. $1\frac{1}{8}$, lat. $\frac{5}{8}$ lin.

Hab. MEXICO, Guanajuato (*Dugès, coll. Sallé*); GUATEMALA, San Gerónimo (*Champion*).

Head impunctate; thorax with distinct punctuation about the middle, especially towards the base, but almost impunctate at the sides, the plica rather deep and distinct. Elytra nearly black, with a large subhumeral and a rather smaller anteapical spot yellow; very distinctly punctate, the punctuation rather coarse near the suture, fine at the sides; the immediate vicinity of the suture is impunctate; and this gives rise to some appearance of a sutural stria. The hind coxæ bear some rather coarse punctures, as do also the wings of the metasternum; the middle of the metasternum has only some very fine punctures. The legs are reddish yellow.

The tarsi in the two individuals before me are slender; and I see no sexual differences.

The species is readily distinguished from *B. lynceus* by the polished upper surface and less dense punctuation; it has a general resemblance to the European *Hydroporus goudotii* and *H. pumilus*, Aubé.

The specimen from Guanajuato is rather more closely and finely punctate and somewhat darker in colour than the San Gerónimo individuals.

6. **Bidessus quadrinotatus.**

Ovalis, convexus, sine pubescentia, nitidus, subtiliter punctatus, rufus, thorace ad marginem anticum et ad basin elytrisque nigricantibus, his signatura transversa subbasali, alteraque longitudinali ante apicali testaceis; pectore abdomineque piceis; clypeo in medio marginato.

Long. 1, lat. $\frac{5}{8}$ lin.

Hab. MEXICO, Cordova (*Sallé*).

Antennæ elongate, red. Head large, obscure fuscous red, almost impunctate, the clypeus rather indistinctly margined in the middle in front. Thorax finely and moderately closely punctate, the punctuation more distinct on the middle than elsewhere; the basal impression on each side deep and distinct. Elytra rather closely, but finely

and obsoletely punctured, blackish, with a large transverse mark behind the shoulder, and another, smaller, longitudinal mark before the apex, yellow; the basal impression deep, and quite as long as that on the thorax. Hind coxæ with only a few subobsolete punctures; metasternum on each side with more distinct punctures. The front and middle tarsi are slender in the specimens before me.

This is a species very difficult to place, but, on the whole, is probably nearer to *Hydroporus pictodes*, Crotch, than to any other species.

7. **Bidessus fryi.**

Hydroporus fryii, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 181 [1].

Hab. Mexico (*Truqui* [1]).

The description points to a species possibly allied to *B. quadrinotatus* or *B. quadrisignatus*, but with thoracic impression or plica fine and thread-like.

8. **Bidessus latifrons.**

Ovalis, parum convexus, sine pubescentia, pernitidus, subtiliter punctatus, castaneus, elytris pone basin et ante apicem vix discrete testaceo signatis, antennis pedibusque testaceis; clypeo in medio marginato.

Long. vix 1, lat. vix $\frac{5}{8}$ lin.

Hab. Guatemala, San Gerónimo (*Champion*).

Antennæ rather elongate, slender, clear yellow. Head broad, almost impunctate; clypeus margined in front in the middle. Thorax finely punctate, on each side with a fine but distinct and elongate stria. Elytra with the basal portion broadly but indefinitely pale, and with a very indistinct pale mark just before the apex, rather finely but quite distinctly punctate, the punctuation more obsolete near the base than elsewhere. Hind coxæ with some moderately coarse punctures; metasternum rather more finely punctate.

I have seen but a single individual; it has the front tarsi quite slender, and may be either male or female. Although very different in appearance, the species appears to be undoubtedly allied to *B. quadrinotatus*.

9. **Bidessus lynceus.**

Bidessus lynceus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 368.

Hab. Guatemala, Guatemala city and San Gerónimo (*Champion*).

The species should be placed in the 4th group of my memoir, and not in the 5th group, where it was (*loc. cit.*) located by an error.

10. **Bidessus substriatus.**

(♀.) Ovalis, latiusculus, fusco-rufus, limbo dilutiore, sine pubescentia, opacus, obsolete punctatus; elytris impressione basali sat elongata, stria suturali obsoletissima; coxis posticis punctis paucis magnis obsoletis.

Long. $1\frac{1}{8}$, lat. $\frac{5}{8}$ lin.

Hab. Mexico, Oaxaca (*Höge*).

This species should be placed between groups 4 and 5 of my memoir; for it has the small coxæ of the former, but the other characters are rather those of the latter of these groups. I have only two individuals before me; they are no doubt females, although they have the tarsi moderately broad; they are extremely similar to the opaque female form of *Dytiscus unistriatus*, Schranck, but are much larger, and the punctuation of the metasternum is wanting. The elytral stria is very distinct, and is about as long as that on the thorax.

11. **Bidessus affinis.**

Hydroporus affinis, Say, Tr. Am. Phil. Soc. ii. p. 104.
Hydroporus emilianus, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 183[1].
Hydroporus charlottii, Clk. loc. cit. p. 182.

Hab. North America, from Sitka and Canada southwards.—Mexico [1]; Guatemala.—South America to Chili and Buenos Ayres.

This widely distributed species shows many variations. The specimens from Mexico are smaller and more finely punctate than those from Guatemala, and are of obscure reddish colour, but exhibit a good deal of variation: it was on such specimens that Clark founded his *Hydroporus emilianus*; but there are no characters by which it can be distinguished from some of the North-American varieties. The individuals from Guatemala approach to a variety found in Nevada, North America.

12. **Bidessus subornatus.**

Oblongo-ovalis, minus angustus, subtiliter pubescens, fuscus, antennarum basi, pedibus prothoraceque testaceis, hoc basi fusco; elytris subtiliter punctatis, parce sed longius pubescentibus, plica basali sat elongata profunda, signatura transversa subbasali alteraque apicali obsoletis testaceis; corpore subtus fere impunctato, parcius pubescente.

Long. $\frac{3}{4}$–$\frac{7}{8}$, lat. vix $\frac{1}{2}$ lin.

Hab. Mexico, Oaxaca (*Höge*); Guatemala, San Gerónimo (*Champion*).

Head impunctate in front, but with distinct punctures on the vertex. Thorax yellow, with the base broadly infuscate, on each side with a very deep impression or plica, at the base in the middle distinctly punctate, elsewhere almost impunctate. Elytra finely, moderately closely punctate, with a scanty and very fine but somewhat elongate pubescence, with very indistinct traces of a sutural stria, of a fuscous colour, with an indistinct angular pale mark extending from the shoulder inwards and backwards, and with a smaller mark near the apex; the basal plica deep, slightly longer than the thoracic stria.

The species may be placed next to *Hydroporus affinis*, Say, from which it is readily distinguished by its broader form, distinct pubescence, and the more elongate plica on

the wing-cases. The specimens before me show no sexual differences, and have the tarsi slender.

13. **Bidessus abjectus.**

Breviter ovalis, fuscus, limbo dilutiore, antennarum basi testacea, pedibus fusco-testaceis; prothorace parce punctato, striga profunde impressa; elytris sat crebre fortiter punctatis, striga basali breviuscula; coxis posticis abdominisque basi punctis paucis magnis.

♂ nitidus, corpore supra conspicue punctato.

♀ opaca, corpore supra fere impunctato.

Long. $\frac{7}{8}$, lat. $\frac{1}{2}$ lin.

Hab. Mexico, Oaxaca (*Höge*).

This species is allied to *Hydroporus fuscatus*, Crotch, but is of a very much shorter form and of more obscure colour, the elytra being without markings; and the difference of the sexes is remarkable. From all the varieties of *Hydroporus affinis*, Say, it may be distinguished by the presence of coarse punctures on the coxæ; it is also shorter in form than the common species.

14. **Bidessus magensis.**

Hydroporus magensis, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 182 [1].

Hab. Mexico [1].

15. **Bidessus spretus.**

Breviter ovalis, nitidus, fere sine pubescentia, testaceus, capite elytrisque infuscatis, antennis versus apicem fusco-testaceis, abdomine pectoreque nigricantibus; elytris tantum sparsim obsoleteque punctatis, stria suturali profunda, basi plica conspicua sat elongata.

Long. $\frac{7}{8}$, lat. vix $\frac{1}{2}$ lin.

Hab. Guatemala, San Gerónimo, Paso Antonio, 400 feet (*Champion*).

This species is very similar to *Hydroporus lacustris*, from which, however, it can be distinguished at once by possessing a deep distinct sutural stria; the wing-cases, too, are more shining, their punctuation being more scanty. The basal stria or plica is longer than that of the thorax, as is the case in *H. lacustris*. All the specimens before me have the tarsi slender; and I can see no sexual distinctions.

16. **Bidessus obtusus.**

Oblongo-ovalis, postice minus acuminatus, sine pubescentia, nitidus, testaceus; elytris lineis latiusculis elongatis nigris, versus suturam sparsim punctatis, impressione basali parum elongata; corpore subtus fere impunctato.

Long. 1, lat. $\frac{1}{2}$–$\frac{5}{8}$ lin.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).

Antennæ short and rather stout, clear yellow. Head impunctate. Thorax impunctate, but on each side with a deep and rather broad basal impression. Elytra distinctly

punctate near the suture, elsewhere almost impunctate, without any trace of sutural stria, but with an obsolete discoidal stria, the basal impression broad but short, scarcely so long as that on the thorax; they are yellow in colour, but have each two broad dark straight lines extending from the base to near the apex, where they are quite united; between the inner of these lines and the suture there is a rather shorter dark line, which is frequently joined to the inner line so as merely to increase the breadth of the latter; the suture also is black, and is separated only by a very narrow space from the black mark near it.

This species has the tarsi quite slender; and I can see no sexual distinctions. It should be placed between *Hydroporus pullus*, Lec., and the South-American *Bidessus discoidalis*, Sharp.

17. **Bidessus elongatus.** (Tab. I. fig. 7.)

Suboblongus, angustulus, subparallelus, rufo-testaceus, elytris fuscis testaceo-signatis; prothorace basi utrinque stria curvata sat elongata; elytris sine impressione basali, opaculis, obsolete punctatis tenuiterque pubescentibus.

Long. $1\frac{3}{8}$, lat. $\frac{5}{8}$ lin.

Hab. GUATEMALA, Paso Antonio, 400 feet, and Torola, 1000 feet (*Champion*).

Antennæ yellow, rather elongate and slender. Head and thorax clear yellow; the latter with a small cloud of darker colour at the base on each side, and in the same position with a curved fine stria, the surface sparingly and obsoletely punctate. Elytra elongate and narrow, without any trace at the base of a continuation of the thoracic stria, very finely and rather sparingly punctured and delicately pubescent, of a fuscous colour, marked, more particularly at the sides, with yellow; some distance behind the base is an indistinct yellow mark, which, with its fellow of the opposite side, forms an incomplete and irregular and indistinct transverse fascia; and at the apex a marginal mark extends a good deal inwards. Under surface and legs clear yellow; the hind coxæ somewhat sparingly and not coarsely punctate. The male has the three basal joints of the front and middle tarsi much dilated.

This peculiar species will no doubt form a distinct genus. It has the prosternal process large and broad, and depressed along the middle. It is perhaps more allied to the Australian *B. denticulatus* than to any other known species; but it has no trace of any sutural stria on the wing-cases.

18. **Bidessus adumbratus.**

Hydroporus adumbratus, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 183[1].

Hab. MEXICO (*Truqui*[1]); GUATEMALA, Paso Antonio, 400 feet (*Champion*).

This is one of a group of small species found in the New World, and distinguished by a peculiarity of structure of the middle of the breast: the coxal lines are deeply impressed, and instead of ceasing at the anterior margin of the coxæ, commence there

to converge, and are continued forwards as two acute elevations along the middle of the metasternum; these two lines are approximate and parallel in the anterior part of their course, and terminate in front at the edges of the metasternal groove receiving the prosternal process. The two species of the group are, in addition to the *H. adumbratus*, the North- and South-American *Hydroporus pulicarius*, Aubé, and the Cuban *H. caraibus*, Chev. All these three species are excessively similar to one another; and their limits are doubtful; it is indeed by no means clear that the Paso-Antonio specimens are certainly of the same species as the Mexican individuals described by Clark. I am not quite sure about the structure of the front feet; but if, as I believe, the two anterior pairs are 5-jointed, it is probable these insects form a genus allied to the peculiar Australian *Sternopriscus*, to which they are a good deal similar in appearance.

CŒLAMBUS.

Cœlambus, Th. Sk. Col. ii. p. 13; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 861 (1882).

About fifty species are united to form this genus. They are characteristic more especially of the North-American and Mediterranean regions, none being known from the Antilles or South America.

1. Cœlambus wardi.

Hydroporus wardii, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 177; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 399.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*), Puebla, Parada, Toluca (*Sallé*), Oaxaca (*Höge*).

2. Cœlambus medialis.

Hydroporus medialis, Lec. Ann. Lyc. N. York, v. p. 209; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 401.

Hab. North America, San Diejo, California.—Mexico, Jalapa and Oaxaca (*Höge*).

3. Cœlambus infacetus.

Hydroporus infacetus, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 180[1]; Trans. Roy. Dubl. Soc. n. s. ii. p. 798.

Hab. Mexico (*Truqui*[1]).

The unique type of this species is unfortunately lost. It will not be easy from the description to determine the species with certainty; but it would appear that it is probably an insect allied to *Hydroporus medialis*, Lec.

DERONECTES.

Deronectes, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 865.
Hydroporus (ex parte), Aubé, Spec. Gén. vi. p. 468.

This is a genus of about fifty species, specially characteristic of the Mediterranean region; two or three species are known from North America, but none from the Antilles or South America.

1. **Deronectes striatellus.**

Hydroporus striatellus, Lec. Ann. Lyc. v. p. 207; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 435.

Hab. CALIFORNIA.—MEXICO, Guanajuato (*Dugès, coll. Sallé*), Puebla (*Sallé*), Jalapa (*Höge*).

This species varies a good deal in its markings, and not inconsiderably in the distinctness of the external striæ on the wing-cases.

2. **Deronectes æquinoctialis.**

Hydroporus æquinoctialis, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 178; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 446.

Hab. MEXICO, Puebla, Etla (*Sallé*), Guanajuato (*Dugès, coll. Sallé*), Oaxaca, Jalapa (*Höge*); GUATEMALA, Guatemala city, 5000 feet, Quiche Mountains, 7000 to 9000 feet (*Champion*).

At the time I described this species (*loc. cit.*) I was acquainted only with a single individual, and referred it to the genus *Hydroporus* because nearly all of the New-World allies belong to that genus. I find, however, on dissection, that it is a *Deronectes*; for although the mesosternum and metasternal process appear to be connected, yet on extracting the coxæ from their cavities it is seen that such connexion does not exist. The differences between the sexes are but slight; the female, however, has the thorax narrower at the base. The yellow marks on the elytra vary a good deal, and are sometimes nearly obliterated.

3. **Deronectes opaculus.**

Ovalis, nigricans, opacus, antennis pedibusque rufo-testaceis, illarum apicibus, harum tarsis fuscis, elytris plus minusve testaceo signatis; corpore dense subtilissime punctato, elytris stria suturali punctorum.

Long. 2, lat. $1\frac{1}{4}$ lin.

Hab. MEXICO, Guanajuato (*Dugès, coll. Sallé*).

This species is somewhat similar to *Hydroporus æquinoctialis*, Clk., but is rather larger and has only the sutural series of punctures distinct. The apices of the coxal processes show a peculiar construction, which allows the species to be readily identified; the articular cavities are not contiguous, the partitions separating them being very distinctly exposed, and over each, at a little distance from the coxal line, there is a small linear or tubercular prominence. The hind tibiæ have only the serial punctures on their infero-external aspect. These characters completely isolate this species; so that it will probably prove to be representative of a new group or subgenus. The sculpture of the upper surface is similar to that of *Hydroporus æquinoctialis*, except that it is still

finer and more obsolete; the under surface is densely and finely rugose, the sculpture here being rougher than in *H. æquinoctialis*. In one of the individuals before me the wing-cases have no yellow marks; in the other two there is a large basal and several other more indefinite and smaller marks. The sexes are very similar; but the male has the front and middle tarsi a little broader, and the claws of the anterior feet a little longer and stouter than the female, and in this latter sex the thorax at the base is just perceptibly less broad.

HYDROPORUS.

Hydroporus, Clairv. Ent. Helv. ii. p. 182 (1806); Aubé, Spec. Gén. vi. p. 468; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 868.

This is the most extensive of the genera of Dysticidæ, and comprises upwards of 150 species; it is nearly confined to the Palæarctic and Nearctic regions, where numerous species occur in high latitudes; one or two are confined to the Rio de la Plata and Chili, and one or two to Southern Africa.

1. Hydroporus infaustus.

Hydroporus infaustus, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 179[1].

Hab. Mexico, between Nopaluca and Vera Cruz (*Truqui*[1]).

The description of this species was made from a single individual; and I am inclined to think the name is probably only a synonym of *Hydroporus striatellus*; this, however, must remain uncertain till the fauna of Mexico is more completely known to us, Clark's unique type having been, I believe, lost.

2. Hydroporus mexicanus.

Hydroporus mexicanus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 447[1].

Hab. Mexico[1].

Var. minor, elytris immaculatis.

Hab. Mexico, Jalapa (*Höge*).

The unique individual taken by Höge is a female, and, although considerably smaller than my original specimens, does not appear to differ in other important respects.

3. Hydroporus roffi.

Hydroporus roffi, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 176[1].

Hab. Mexico (*Truqui*[1]).

If I am right in identifying two individuals in my collection with Clark's description, this species is distinct from *H. decemsignatus* by its rather smaller size and shorter form, by its more distinctly punctured head and thorax, by the interposition of a number of punctures between the sutural and discoidal series on the wing-cases, and by its shorter

and darker-coloured legs, with markedly shorter claw-joint to the front and middle tarsi.

4. **Hydroporus decemsignatus.**

Hydroporus decemsignatus, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 176[1].

Hab. Mexico (*Truqui*[1]).

This is no doubt a very variable species in respect of the markings, and is closely allied to *H. nebulosus*; but, independent of the very different colour, it is of shorter and broader form.

5. **Hydroporus libens.**

Hydroporus libens, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 446.

Hab. Guatemala, Guatemala city, 5000 feet (*Champion*).

This is very similar to the black varieties of *H. decemsignatus*; but it is smaller and narrower, and the fine punctuation of the surface is more obsolete, and the legs are shorter.

6. **Hydroporus nebulosus.**

Ovalis, convexus, latiusculus, subnitidus, ferrugineus, capite, thorace elytrisque fusco signatis, abdomine pectoreque nigricantibus; elytris subtilissime punctatis, seriebus tribus punctorum, prima suturali punctorum profundorum, secunda conspicua, tertia externa obsoleta; corpore subtus subopaco, subtilissime coriaceo, minus profunde ruguloso.

Long. 2, lat. $1\frac{5}{16}$ lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*).

This species is very closely allied to *H. mexicanus*; but it is smaller, and the upper surface is less convex, and the sculpture throughout is finer; the colour in the two is very different; but as this is no doubt subject to considerable variation, little importance can be at present attached to it. In this species the colour of the upper surface is ferruginous (perhaps in fresh individuals yellow); there is a large dark mark near the eye on each side, the two being nearly or quite united. The front margin of the thorax is dark; and there is a large dark mark at the base on each side of the middle. On the wing-cases the dark marks are very indefinite, and consist of small nebulosities more or less connected together; the series of punctures become obsolete before the extremity, the sutural series reaching nearer to the apex than do the others.

I do not know the sex of the two individuals before me, which are in a bad state of preservation; but I believe them to be males.

7. **Hydroporus interjectus.**

Ovalis, latiusculus, convexus, niger, dense subtiliterque punctatus, subopacus, antennarum basi testacea, pedibus anticis piceo-rufis, posticis nigris; elytris serie suturali punctorum profundorum, præter hanc seriem

punctis numerosis subseriatis, externis seriebus obsoletis; corpore subtus opaco, coxis posticis abdomineque basi rugis profundis.

Long. 2, lat. $1\frac{5}{16}$ lin.

Hab. GUATEMALA, Quiche Mountains, 7000–9000 feet (*Champion*).

This species is closely allied to *H. mexicanus*, but readily distinguished by the numerous punctures interspersed between the sutural and discoidal series on the wing-cases; besides this, the sculpture throughout is finer, and the size less. It is also extremely similar to the entirely black varieties of *H. decemsignatus*; but it has a broader head and is less acuminate behind, and is also readily distinguished from it by the additional punctures on the wing-cases: these additional punctures assume a subseriate form, and thus the true series are not readily recognized; but they exist as in the other allied species.

I do not know the sex of the unique individual found by Mr. Champion.

8. **Hydroporus bifidus.**

Hydroporus bifidus, Say, Trans. Am. Phil. Soc. iv. p. 444[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 789.

Hab. MEXICO, Vera Cruz [1].

The descriptions apparently indicate an insect similar to *H. æquinoctialis*, Clk.

9. **Hydroporus nudatus.**

Hydroporus nudatus, Say, Trans. Am. Phil. Soc. iv. p. 444[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 803.

Hab. MEXICO, Vera Cruz [1].

This is apparently also similar to *H. æquinoctialis*, and may probably, indeed, prove to be the same.

10. **Hydroporus sericatus.**

Hydroporus sericatus, Say, Trans. Am. Phil. Soc. iv. p. 445[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 810.

Hab. MEXICO, Vera Cruz [1].

This is stated by its describer to be near to *H. undulatus*, Say.

11. **Hydroporus kingi.**

Hydroporus kingii, Clk. Ann. & Mag. Nat. Hist. ser. 3, x. p. 178[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 799.

Hab. MEXICO (*Truqui* [1]).

A specimen of this species in our national collection at the British Museum indicates that this is a species allied to the Californian *H. vilis*, Lec.

CELINA.

Celina, Aubé, Ic. Col. Eur. v. p. 219 (1836); Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 872.

This is a very isolated genus, comprising about ten species, all of which are peculiar to the eastern portions of the New World, where they range from Brazil to the United States of North America, but have not been detected in the Antilles.

1. Celina punctata.

Suboblonga, elongata, transversim convexa, sat nitida, crebre punctata, antennis elongatis gracilibus; elytris serie discoidali obsoleta; pectore dense ruguloso, metasterno medio lævigato; corpore apice breviter mucronato.

Long. 3, lat. $1\frac{1}{4}$ lin.

Hab. Guatemala, Paso Antonio, 4000 feet (*Champion*).

This species is of more convex form than others of the genus, and is remarkable on account of its much-punctured surface. The large head is rather closely and finely punctate; all the surface of the thorax is punctate, the punctuation near the hind angles dense; and at this spot there is an oblique impression; the hind angles are indistinct and rather rounded. The punctuation of the elytra is close and distinct, so that the discoidal series of punctures is much obscured; nevertheless it exists, and may easily be detected on the basal part. A very fine pubescence is present on the wing-cases.

I am uncertain as to the sex of the unique individual. The front and middle tibiæ are simple; but their tarsi are quite broad, and, moreover, are clothed beneath with a kind of glandular pubescence similar to what exists in the males of many species of *Agabus*; so that I think, notwithstanding the simple tibiæ, the specimen may prove to be a male. The species is probably allied to *C. latipes*, Brullé, from the interior of Brazil, of which only a single individual is known.

2. Celina aculeata.

Celina aculeata, Aubé, Spec. Gén. vi. p. 446.

Hab. Panama.—Brazil, Santa Rita (*Sahlberg*).

This is recorded as Central-American on the authority of a male in bad condition purchased by me ten years ago in London. It is probable that this individual may prove to be distinct from the Brazilian species.

3. Celina gracilicornis.

Suboblonga, parallela, nitida, glabra, rufo-testacea; elytris obscurioribus, sparsim fere obsolete punctatis, serie discoidali distincta; antennis elongatis, gracilibus; coxis posticis sat crebre haud fortiter punctatis; corpore breviter mucronato.

Long. 2, lat. $\frac{13}{16}$ lin.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).

This species is remarkable from the diminished punctuation of the upper surface and the comparatively slender elongate antennæ. The unique individual is no doubt a female, although it has the front and middle tarsi broad. The thorax at the base is quite as broad as the elytra, so that the outline is perfectly continuous; the hind angles are well marked and rectangular; its surface is very polished and shining; the anterior series of punctures, however, are distinct, although the basal series is obsolete.

4. **Celina debilis.**

Suboblonga, angustula, nitida, glabra, rufo-testacea; elytris parce subtiliter punctatis, serie discoidali distincta; antennis parum elongatis; coxis posterioribus externe subobsolete rugoso-punctatis.
Long. $1\frac{1}{2}$, lat. $\frac{5}{8}$ lin.

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*).

This species is remarkable from its small size and scanty punctuation. The male front tarsi are scarcely at all dilated, and the tibiæ are simple; the intermediate tibiæ in this sex are curvate and notched inwardly above the middle, with a minute tooth above the notch. There is only a very slight sexual difference in the length of the antennæ, these organs being just perceptibly longer in the male.

C. debilis is allied to *C. angustata*, Aubé, with which I have no opportunity of comparing it; but it is no doubt smaller, with the male front feet less dilated.

AGABUS.

Agabus, Leach, Zool. Misc. iii. pp. 69, 72 (1817); Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 876.

This is an extensive genus of fully one hundred species, inhabiting chiefly the northern portions of the Nearctic and Palæarctic regions, where they ascend to high latitudes. Mexico thus appears to be the extreme extension of the genus southwards in the New World.

1. **Agabus spinipes.**

Ovalis, parum convexus, subnitidus, niger, supra subænescens, antennis palpisque rufis, pedibus piceo-rufis; elytris densissime reticulatis, punctis subseriatis sat conspicuis; antennis palpisque crassiusculis; pedibus omnibus crebrius spinulosis; corpore subtus sublævigato; prosterni processu basi crasse marginato; coxis posticis parvis.
Long. 3, lat. $1\frac{3}{4}$ lin.

Hab. MEXICO, Oaxaca (*Höge*).

This is a peculiar and very distinct species, not nearly allied to any other known, but possibly approaching the peculiar Californian *Hydrotrupes palpalis*. The prothorax is a little narrower than the elytra, but little curved at the sides, the hind angles obtuse, the lateral margin strongly elevated but not broad. Elytra very finely and densely reticulate, so as to be but little shining, with the usual subserial punctures large but not distinct. Under surface with only very fine and obsolete sculpture; the anterior

tibiæ short and stout; all the tibiæ armed with more numerous spines than usual in the genus; the legs very little ciliate, the hind tarsi quite slender, the femoral cilia extremely rudimentary. The male has the front tarsi distinctly incrassate, the pubescent area of their under surface very small, and extending only to the second joint and the extremity of the first; the middle tarsi are rather longer than in the female, and their basal joints are a little incrassate, the first joint with a small pubescent area beneath; in this sex the posterior femur has a very obscure angle on the hind margin near the base. In each sex the apical ventral segment is entirely destitute of rugæ, and has only three or four punctures on each side. The female has a distinct reticulation on the head and thorax, which appears to be more obsolete in the male.

2. **Agabus americanus.** (Tab. I. fig. 8.)

Agabus americanus, Aubé, Spec. Gén. vi. p. 334; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 498.

Hab. MEXICO, Las Vigas, Cerro de Plumas (*Höge*), Parada (*Boucard, coll. Sallé*).

This seems to be a rather variable species. There are two forms of the female among the specimens before me: this sex is usually very polished and shining like the male; but there are two or three individuals in which the thorax and elytra are very densely strigose-reticulate and quite dull, the extremity of the wing-cases, however, like the head, being shining and without strigosities.

The position of the species is very difficult to decide; but I think that it should probably be isolated as a group to be located near groups 2 and 5 of my memoir.

3. **Agabus amaroides.**

Oblongo-ovalis, parum convexus, niger, supra nigro-æneus, antennis rufis, pedibus piceis; superne vel nitidus obsoleteque reticulatus (♂), vel subopacus conspicue densissimeque reticulatus (♀); prothorace elytris paulo angustiore, lateribus obliquis parum curvatis, angulis posterioribus rectis, haud rotundatis.

Long. 4–4$\frac{1}{4}$, lat. 2$\frac{1}{4}$ lin.

Hab. MEXICO, Las Vigas (*Höge*).

The prosternal process is rather broad and finely margined, nearly flat. The hind coxæ are rather small, and are finely but distinctly and densely strigose. The hind legs are slender, the tarsal claws large, the femoral cilia moderately well developed. The male has the three basal joints of the front and middle tarsi a good deal incrassate, and furnishing beneath a large area covered with rather long glandular pubescence; the anterior claw of the front foot has the basal portion dilated, so as to form a large lobe with acute angle; in this sex the apical ventral segment is coarsely longitudinally rugose. In the few individuals before me the difference in sculpture of the sexes is remarkable. One of the two males has a remarkable monstrous development of the left anterior tarsus, it being provided with no less than six claws; these claws are placed so as to form three pairs, of which the anterior and posterior pairs, may be described

as normal though rather small, while the middle pair are much smaller and are simple (that is to say, neither of them possesses the angular basal lobe).

This is another peculiar species for which I can indicate no near ally.

COPELATUS.

Copelatus, Er. Gen. Dyt. p. 38 (1832); Aubé, Spec. Gén. vi. p. 365; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 892.

This, again, is an extensive genus of fully one hundred species; but it is characteristic of the warmer portions of the two hemispheres, and in these has a very wide distribution. The species have been grouped by me (*loc. supr. cit.*) according to the striation of the wing-cases. I have included this character in the diagnoses here given of new species; but it may facilitate reference to state that *Copelatus laccophilinus* and *C. biformis* should be referred to group 1, *C. sallæi* and *C. solitarius* to group 4, *C. proximus* to group 5, *C. basalis* to group 9, *C. incognitus* to group 10, *C. læticulus* and *C. fragilis* to group 12. *C. biformis*, however, above recorded as pertaining to group 1, is a peculiar species as regards its striation, as will be perceived on referring to its description.

1. **Copelatus biformis.**

Ovalis, angustulus, nitidus, rufo-testaceus, elytris vage nigro signatis.
Long. $2\frac{1}{2}$, lat. $1\frac{5}{16}$ lin.
♂. Elytris estriatis.
♀. Elytris quadristriatis.

Hab. Mexico, Cordova (*Sallé*).

This is a very peculiar species, not only by reason of its system of coloration, but also on account of the remarkable sexual discrepancy in the striation of the elytra. The wing-cases are pale, with the suture and external margin more or less deeply black; and besides this there is a dark transverse subbasal, and another dark postmedial fascia; these fasciæ appear to arise from the more or less complete union of longitudinal patches of dark colour developed along the serial punctures or striæ. The male has the front and middle tarsi moderately dilated, and has the lines of serial punctures distinct, near the base becoming so definite as almost to form two striæ. The female has some very fine sexual sculpture on the lateral portions of the prothorax; and on the wing-cases there are four very distinct striæ; these striæ, though placed on the lines of the serial punctures, do not altogether obliterate these. The first stria is twice as far from the suture as it is from the second stria; it commences some little distance behind the base, and terminates much in front of the apex, at the hind margin of the dark post-medial fascia. The second stria is still more abbreviate in front than is the first one; but the third commences just behind the base; the fourth stria is finer than the other three and shorter. There are traces of a fifth more external stria; and, moreover,

towards the sides behind the base there is some very fine sexual sculpture. There is no submarginal stria.

The species has no near ally.

2. **Copelatus laccophilinus.**

Ovalis, parum convexus, ferrugineus, thorace in medio elytrisque fuscis, his testaceo signatis ; corpore superne lævigato, infra coxis versus latera abdominisque basi strigulosis.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{4}$ lin.

Hab. Panama, Volcan de Chiriqui, 2000–3000 feet (*Champion*).

This species is very different from any other *Copelatus* yet discovered, and much resembles a *Laccophilus* on account of the smooth upper surface, on which even the serial punctures are fine. The resemblance to the eastern genus *Lacconectes* is still greater ; but the generic characters drawn from the coxal lobes leave it a true *Copelatus*. I have but a single individual before me, of the female sex. The antennæ are reddish yellow. The prothorax is broadly yellow at the sides, infuscate in the middle ; the surface is smooth ; but at the sides some excessively fine scratches can be detected. The elytra are very smooth, and the serial punctures are very fine, but some of those near the base are a little elongate ; the colour is fuscous or smoky, but at the extreme base is a transverse fascia extending neither to the outer margin nor to the suture ; near the side, about the middle, is a longitudinal pale mark, and some distance in front of the apex there is a very obscure transverse fascia of isolated pale marks, and the apex itself is pale. The legs are all reddish yellow.

3. **Copelatus mundus.**

Copelatus mundus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 574.

Hab. Mexico, Cordova (*Sallé*), Cerro de Plumas (*Höge*).

The male of this species has the front and middle tarsi broadly dilated ; its anterior tibiæ are destitute of notch ; near the sides of the thorax there are a few very short scratches or impressions.

The species was described by me from a single female. In the specimens now before me the under surface is red, but more or less infuscate, especially on the terminal ventral segments ; probably in quite fresh undecayed specimens the under surface is reddish yellow.

4. **Copelatus sallæi.**

(♂.) Oblongo-ovalis, ferrugineus, elytris, antennis, pedibus, elytrorum basi, apice plagaque indeterminata versus latera testaceis ; prothorace sparsim brevissime striguloso ; elytris punctulatis, striis octo sat subtilibus, alternis ad apicem brevioribus, stria octava, a margine remota, postice disintegrata et magis abbreviata.

Long. $3\frac{1}{8}$, lat. $1\frac{1}{2}$ lin.

Hab. Mexico, Cordova (*Sallé*).

Head finely punctulate, pale red. Thorax red, more or less infuscate about the middle, with a short channel on the disk, and some very short impressions or scratches rather irregularly distributed over the surface; near the posterior angle is a small space on which the impressions are more closely placed than they are elsewhere. The striæ on the elytra are moderately fine; the first, third, fifth, and seventh are longer than the others, and only disappear a short distance before the apex; the first stria is separated from the suture by about twice the space that intervenes between it and the second stria; the eighth stria is placed some distance internal to the shoulder, and is much abbreviated behind, its terminal portion being, moreover, broken into short isolated impressions; from the shoulder there may be traced backwards some short scratches, forming, as it were, the rudiments of a ninth stria.

The male has the front and middle tarsi rather broadly dilated, and furnished beneath with conspicuous palettes. The female is unknown.

The specimens described are badly preserved, and the colour as above given may not prove to be a very accurate interpretation.

5. **Copelatus solitarius.**

(♀.) Oblongo-ovalis, angustulus, ferrugineus, thorace in medio obscuro, elytris fuscis, basi apiceque cum antennis pedibusque testaceis; prothorace subtiliter striguloso obsoleteque punctulato; elytris punctulatis, striis octo impressis, harum secunda quartaque postice valde abbreviatis, ceteris elongatis.

Long. $2\frac{1}{2}$, lat. $1\frac{1}{8}$ lin.

Hab. Mexico, Cordova (*Sallé*).

Head red, with the vertex finely strigulose. Thorax infuscate red, with the sides pale, the surface with fine, short, and distant scratches, wanting on the middle. On the wing-cases the second and fourth striæ are much shorter than the others, extending only one half, or less, of the distance from the base to the apex; the first stria is about the same distance from the suture as it is from the third stria; it and the second and fourth striæ are a little finer than the others; the second and fourth striæ are, as it were, interpolated between the others, the interstices adjoining them being narrower than the contiguous interstices: with the exception of these two striæ, the others are of nearly one length, except that the eighth is a little shorter behind than the rest. At the base the striæ are a little irregular in their lengths: the third and fifth extend quite to the base; but the others only commence at short though variable distances behind it. The elytra are feebly punctate, but are entirely destitute of strigosities.

The species is described from a single female. It has not at present any near ally.

6. **Copelatus proximus.**

Oblongo-ovalis, angustus, fusco-piceus, capite, thorace, antennis pedibusque rufis; elytris ad basin et ad apicem testaceis, striis decem conspicuis, alternis multo brevioribus, octava tantum ad basin relicta; coxis posticis fortiter strigosis.

Long. $2\frac{1}{4}$, lat. 1 lin.

Hab. Guatemala, San Gerónimo (*Champion*).

I have before me only two immature female examples of this species. The head possesses a fine and rather distant punctuation, which becomes quite obsolete in front. The thorax shows rather numerous fine short scratches, these being, however, wanting on the middle, where a feeble punctuation is still visible. The striæ on the elytra are not very fine, the two near the suture, however, being rather finer than the others; the first, third, fifth, seventh, and ninth are elongate, of one length, extending nearly to the extremity; the second, fourth, sixth, and eighth are much shorter, the latter, indeed, being only a very short stria near the base; the tenth is only a little more abbreviate than the ninth. The striæ even at the base show some little differences in length, the first and second only commencing some little distance beyond the base; there is no sexual sculpture on the elytra, except a feeble punctuation that is present should prove to be such.

The species is no doubt very closely allied to the South-American *C. consors*, Shp., but is rather smaller, narrower, and more parallel, and the striæ are rather deeper and are less regular at the base. The sculpture in the two females before me is excessively similar to that of the second form of female of *C. consors*.

The two specimens described being immature, the colour may not be quite normal.

7. **Copelatus neglectus.**

Copelatus neglectus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 575.

Hab. Venezuela, Cumana.

Var. paulo major, striis subtilioribus, alternis magis abbreviatis.

Hab. Mexico, Cordova (*Sallé*).

I refer to this species with some doubt two males from Sallé's collection. The species is only incompletely known to me, and probably a series would show the Mexican specimens to possess distinctive characters. *C. neglectus* is one of the species in which there are two forms of the female, one extremely different in sculpture from the male, and a good deal resembling the specimens I now describe (*posteà*, p. 38) under the name of *C. incognitus*; indeed it strikes me as just possible that the Mexican males of *C. neglectus* may be the consorts of *C. incognitus*, of which otherwise the mal is unknown.

8. **Copelatus debilis.**

Copelatus debilis, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 579.

Hab. Mexico, Cordova (*Sallé*); Guatemala, San Gerónimo, Guatemala city (*Champion*); Panama, David (*Champion*).

9. **Copelatus basalis.**

(♀.) Ovalis, ferrugineus, prothorace medio elytrisque fuscis, his apice testaceo, fasciaque basali transversa ferruginea; subopacus, prothorace elytrisque crebre longitudinaliter strigulosis; his apice lævigato, striis

quinque subtilissimis tantum versus apicem perspicuis, alteraque submarginali brevissima ægre discernenda.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{8}$ lin.

Hab. Mexico, Oaxaca (*Höge*).

Although I have before me only a single individual, and that is extremely similar to *C. incognitus*, yet I believe it indicates a distinct species; for it is decidedly smaller and has a basal fascia on the wing-cases, the sexual sculpture is a little finer, and near the apex only five striæ are to be detected; it should be noted that on the middle of the elytra there are, on a critical examination, to be detected five other striæ, representing the alternate striæ of such species as have ten striæ; and it is possible that the male may prove to have ten striæ on the elytra. These alternate obsolete or rudimentary striæ are formed by the joining together in one line of the fine sexual scratches or sculpture.

10. **Copelatus incognitus.**

(♀.) Ovalis, ferrugineus, prothorace medio elytrisque fuscis, his apice testaceo; subopacus, prothorace elytrisque crebre longitudinaliter strigulosis; his apice lævigato, striis sex subtilissimis tantum versus apicem discernendis, alteraque submarginali brevissima ægre discernenda.

Long. $2\frac{1}{2}$, lat. $1\frac{1}{4}$ lin.

Hab. Mexico, Cordova (*Sallé*).

Head red, on the vertex with very fine sculpture. Thorax reddish on the sides, broadly infuscate on the middle, closely covered with elongate scratches or striolæ, which, however, are not connected together so as to form any distinct network. Elytra closely covered from the side margin to the suture with elongate rather deep striolæ; although these scratches are elongate and rather irregular in their direction, so that they appear to form an irregular network of elongate meshes, yet very few of them are actually connected with one another; a rather broad space at the extremity is smooth; on the apical portion six fine striæ may be distinguished, and on a very careful examination they may be traced forwards, or at any rate one or two of them, to near the base. The submarginal stria is short and indistinct, and may easily escape detection.

11. **Copelatus validus.**

Copelatus validus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 584.

Hab. Nicaragua, Chontales (*T. Belt*).

12. **Copelatus læticulus.**

Suboblongus, angustulus, testaceus, prothorace medio elytrisque fuscis, his apice fasciaque transversa basali testaceis; elytris striis decem elongatis, quarum alternis paulo brevioribus, alteraque marginali brevi.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{8}$ lin.

Hab. Mexico, Oaxaca (*Höge*).

Of narrow, elongate, and parallel form. Head without any sculpture. Thorax

yellowish red, but infuscate over a broad space on the middle; towards each side there are numerous short but deep impressions or scratches, most of which have an oblique direction; the curved lateral series of punctures is very much obliterated. Elytra very regularly striated by ten moderately fine lines; the sutural stria is longer than the others, and reaches nearly to the apex; the third, fifth, seventh, and ninth are also elongate, but slightly shorter than the sutural; the second, fourth, sixth, eighth, and tenth are also elongate, but they are distinctly shorter than the others; the submarginal stria is short and fine. The species is described from a single male; it has the front and middle tarsi much dilated, and furnished beneath with rather larger palettes; the anterior tibiæ are rather short and stout, and are without notch. The species is not closely allied to any other; but I think it is just possible that *C. basalis* may prove to be its female.

13. **Copelatus prolongatus.**

Copelatus prolongatus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 586.

Hab. Panama.

14. **Copelatus posticatus.**

Dytiscus posticatus, Fab. Syst. El. i. p. 268; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. 587.
Copelatus posticatus, Aubé, Spec. Gén. vi. p. 372.
Var. *Copelatus signatus*, Sharp, Ent. Mo. Mag. x. p. 53.

Hab. Mexico, Cerro de Plumas (*Höge*), Cordova (*Sallé*); Guatemala, Torola, 1000 feet, Paso Antonio, 400 feet (*Champion*); Nicaragua, Chontales (*T. Belt*); Panama.—South America, from Cayenne to Rio de Janeiro; Antilles, Cuba, Guadeloupe.

This widely distributed species shows a good deal of variation, the most remarkable variety being that found in Nicaragua, and described by me (*loc. supr. cit.*) as a distinct species, under the name of *C. signatus*.

15. **Copelatus terminalis.** (Tab. I. fig. 9.)

Copelatus terminalis, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 588.

Hab. Mexico, Cerro de Plumas, Jalapa (*Höge*); Guatemala, San Gerónimo, El Jicaro (*Champion*).

A large series of this species seems to indicate that it is distinct from *C. posticatus* the specimens show but little variation, except that those from Mexico are not quite so large as those from Guatemala.

16. **Copelatus depressus.**

Copelatus depressus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 588.

Hab. Guatemala, San Gerónimo (*Champion*).

17. **Copelatus impressicollis.** (Tab. I. fig. 10.)

Copelatus impressicollis, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 589.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*), Puebla (*Sallé*), Oaxaca, Cerro de Plumas (*Höge*); Guatemala, San Gerónimo, Guatemala city, 5000 feet (*Champion*).

This is a variable species, in size, colour, and in the striation of the elytra, the alternate striæ being sometimes so much disintegrated and reduced that in extreme cases there may only appear to be five striæ with some broken short lines between them; the colour of the wing-cases sometimes becomes almost yellow; and in Mexico the individuals appear to be usually of larger size than those from Guatemala.

18. **Copelatus distinctus.**

Copelatus distinctus, Aubé, Spec. Gén. p. 375[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 590.

Hab. Mexico [1].

This species is only known at present by a single female in the collection of the Brussels Museum. Now that I have seen a series of *C. impressicollis*, I am of opinion that *C. distinctus* is most likely only an extreme specimen of that species. Should this prove to be correct, the two supposed species will be united under the name given by Aubé, *C. distinctus*.

19. **Copelatus integer.**

Copelatus integer, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 590.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Cubilguitz (*Champion*), Izabal (*Sallé*); Nicaragua, Chontales (*T. Belt*); Bugaba, 800–1500 feet (*Champion*).

The individuals found by Belt are larger, and have the wing-cases paler and their striæ rather deeper than those from the Mexican localities; but these characters, unless confirmed by others, can scarcely be considered to be of specific value.

20. **Copelatus fragilis.**

Oblongo-ovalis, angustulus, nitidus, rufo-testaceus, prothorace, elytris abdomineque fuscis, illo lateribus elytrisque fascia basali testaceis; his striis decem subtilibus elongatis, alternis paulo brevioribus, alteraque marginali antice abbreviata.

Long. 2, lat. 1 lin.

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).

Antennæ elongate, yellow. Thorax infuscate, with the sides yellow, the curved lateral series of punctules indistinct, the surface extremely feebly punctulate, with the sculpture slightly denser near the hind angles, but without any distinct impressions or scratches. Elytra with ten elongate rather fine striæ, the first, third, seventh, and ninth attaining nearly the extremity, while the alternate striæ, though elongate, are distinctly shorter;

the first is a little abbreviate at the base. The male has the front and middle tarsi moderately dilated; and the anterior tibiæ are a little curved below the knee and notched on the inner margin. The female is quite without sexual sculpture.

The species may be placed next to *C. glyphicus*, Say, to which, however, it is by no means closely allied; it is considerably smaller and different in colour; and the striæ are finer and not quite so prolonged at the apex. It very much resembles *C. cælatipennis*, but is smaller, of more parallel form, and has the elytra more finely striated, and the thorax without the numerous minute impressions or elongate punctures found in that species.

21. **Copelatus cælatipennis.**

Copelatus cælatipennis, Aubé, Spec. Gén. vi. p. 382[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 591.

Hab. British Honduras, Rio Hondo (*Blancaneaux*).—South America, Santa Rita and Espirito Santo; Antilles[1].

This species is only recorded as Central American on the authority of a single female from Honduras; this specimen is rather smaller, and has the sculpture on the thorax and wing-cases rather finer than the individuals from Brazil.

COPTOTOMUS.

Coptotomus, Say, Tr. Am. Phil. Soc. iv. p. 443 (1834); Aubé, Spec. Gen. vi. p. 392; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 896.

This is a North-American genus of two or three species, closely allied *inter se*.

1. **Coptotomus interrogatus.**

Dytiscus interrogatus, Fab. Syst. El. i. p. 367; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 601.
Coptotomus interrogatus, Aubé, Spec. Gén. vi. p. 393.

Hab. North America, as far north as Massachusetts.—Mexico, Guanajuato (*Dugès, coll. Sallé*).

A single female from Sallé's collection is the only evidence of the intrusion of this North-American species into Mexico.

2. **Coptotomus serripalpus.**

Coptotomus serripalpus, Say, Tr. Am. Phil. Soc. iv. p. 443[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 770.

Hab. Mexico[1].

Nothing is known about this species except the description above referred to; and it is uncertain whether it will prove to be distinct or only founded on a discoloured example of *C. interrogatus* or one of the other species.

RHANTUS.

Rhantus, Lacord. Faun. Ent. Par. i. p. 309 (1835); Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 899.
Colymbetes (ex parte), Aubé, Spec. Gén. vi. p. 218.

This is a rather extensive genus of about forty species, widely distributed on the surface of the globe, but more especially characteristic of Europe and North America. It is doubtful whether any of the Central-American species will ultimately prove to be peculiar to the region.

1. Rhantus suffusus.

Rhantus suffusus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 613.

Hab. Mexico, city of Mexico (*Flohr*), Toluca (*Sallé*).

The male of this species remains unknown, only a single female, extant in Sallé's collection, being known in addition to the individual found by Mr. Flohr.

2. Rhantus binotatus.

Colymbetes binotatus, Harris, New Eng. Farm. vii. p. 164; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 614.
Colymbetes maculicollis, Aubé, Spec. Gén. vi. p. 245.
? *Colymbetes gutticollis*, Say, Trans. Am. Phil. Soc. iv. 1834, p. 442.

Hab. Western United States.—Mexico, Oaxaca, Almolonga, Jalapa, Toluca, Parada (*Sallé*), Guanajuato (*Dugès, coll. Sallé*); Guatemala, San Gerónimo (*Champion*); Costa Rica, Cache, Irazu, 6000 to 7000 feet, San Francisco, 4500 feet (*Rogers*).

In some of the Mexican individuals of this plentiful species the black spots on the elytra become condensed and suffused, so as to render the wing-cases blackish. Some of these specimens approach very closely to *R. mexicanus*, so that I have little doubt that species will prove to be an extreme form of *R. binotatus*.

3. Rhantus mexicanus.

Colymbetes mexicanus, Cast. Et. Ent. p. 101; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 614.

Hab. Mexico, Oaxaca, Parada, Toluca (*Sallé*), San Luis Potosi (*Palmer*); Guatemala, San Gerónimo (*Champion*).

4. Rhantus atricolor. (Tab. I. fig. 11.)

Colymbetes atricolor, Aubé, Spec. Gén. vi. p. 265; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 615.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*), Orizaba (*Sallé*), Alvarez mountains (*Dr. Palmer*).

5. Rhantus calidus.

Dytiscus calidus, Fabr. Ent. Syst. i. p. 193.
Colymbetes calidus, Aubé, Spec. Gén. vi. p. 262.

Hab. North America, Texas.—Mexico, Cordova (*Sallé*); Guatemala, Torola 1000 feet, Dueñas, San Gerónimo, Guatemala city (*Champion*); Nicaragua, Chontales (*T. Belt*); Costa Rica, San Francisco 4500 feet (*Rogers*).—South America, from Venezuela to Rio Janeiro.

DYTISCUS.

Dytiscus, Linnæus, Syst. Nat. ed. xii. 2, p. 664 (1767); Aubé, Spec. Gén. vi. p. 102; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 904.

This is a genus consisting of about two dozen species specially characteristic of the Palæarctic and Nearctic regions; but the single Mexican species (so far as yet known) is peculiar to Mexico.

1. **Dytiscus habilis.**

Dytiscus habilis, Say, Trans. Am. Phil. Soc. iv. 1834, p. 441; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 636.

Hab. Mexico, Parada (*Boucard, coll. Sallé*).

HYDATICUS.

Hydaticus, Leach, Zool. Misc. iii. p. 69 (1817); Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 907.

This genus comprises about fifty species, and is very widely distributed in both hemispheres.

1. **Hydaticus rimosus.**

Hydaticus rimosus, Aubé, Spec. Gén. vi. p. 182; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 654.

Hab. Mexico, Orizaba, Vera Cruz, Puebla, Cordova (*Sallé*); Guatemala, Dueñas, Guatemala city 5000 feet, Torola 1000 feet (*Champion*).—Antilles, Guadeloupe, Cuba.

2. **Hydaticus subfasciatus.**

Hydaticus subfasciatus, Lap. Et. Ent. p. 96; Aubé, Spec. Gén. vi. p. 186; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 655 [1].

Hab. Guatemala [1]; Panama.—South America, Cayenne, Amazonia.

THERMONECTES.

Thermonectus, Esch. Dej. Cat. ed. ii. (1833).
Thermonectes, Crotch, Trans. Am. Ent. Soc. iv. p. 402; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 909.

About fifteen species are known of this genus; they are peculiar to the warmer parts of America and the Antilles, two or three species extending their range to the United States of North America.

1. **Thermonectes nigro-fasciatus.** (Tab. I. fig. 12.)

Acilius nigro-fasciatus, Aubé, Spec. Gén. vi. p. 136; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 677.

Hab. MEXICO, Puebla, Parada (*Sallé*), Guanajuato (*Dugès, coll. Sallé*), city of Mexico (*Flohr*), San Luis Potosi (*Dr. Palmer*), Oaxaca (*Höge*).

A considerable series of this species exhibits but little variation. The black fascia of the wing-cases is sometimes a good deal diminished in extent; and the anterior of the transverse black marks on the thorax is, though rarely, smaller and broken up. The sexual sculpture on the elytra of the female varies much in its extent; but the thoracic sculpture seems but little variable.

2. **Thermonectes ornaticollis.**

Acilius ornaticollis, Aubé, Spec. Gén. vi. p. 140; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 678.

Hab. NORTH AMERICA, Texas.—MEXICO, Cordova (*Sallé*), Tehuantepec (*coll. Fry*).

The Mexican individuals of this species are referable to two very distinct varieties:—1st, a dark form as described by Aubé (*loc. sup. cit.*); and, 2nd, a variety, of which the size is smaller and the black colour of the upper surface is much reduced—the marks on the thorax consisting of two scarcely perceptible spots on the middle of the front margin, and two elongate marks at the base nearly joined together and each enclosing a pale space.

3. **Thermonectes maculatus.**

Acilius maculatus, Aubé, Spec. Gén. vi. p. 142 [1].

Hab. MEXICO [1].

Although I have not seen any specimen corresponding with Aubé's description, yet I think this insect will prove to be a variety of *T. ornaticollis*.

4. **Thermonectes succinctus.**

Acilius succinctus, Aubé, Spec. Gén. vi. p. 145 [1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 678.

Hab. MEXICO [1].—SOUTH AMERICA, Brazil, Peru.

5. **Thermonectes circumscriptus.**

Dytiscus circumscriptus, Latr. Voy. Humb., Ins. p. 223, pl. xxiii. f. 5.

Acilius circumscriptus, Aubé, Spec. Gén. vi. p. 143; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 679.

Hab. MEXICO, Puebla (*Sallé*); GUATEMALA, Torola 1000 feet (*Champion*); NICARAGUA, Chontales (*T. Belt*).—SOUTH AMERICA, from Colombia to Rio de Janeiro; ANTILLES.

I have seen only half a dozen specimens from Central America; and they seem to indicate it as very variable there. In two of the females found by Mr. Champion at Torola there is no sexual sculpture on the thorax; while a specimen found at Chontales

by Belt is remarkable from its short form, and by the coloration of the thorax being the same as in the Colombian *T. depictus*. These facts render it probable that this latter supposed species will prove to be a variety of *T. circumscriptus*.

6. **Thermonectes cuneatus.**

Thermonectes cuneatus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 682.

Hab. PANAMA.

A second female, agreeing with that originally described, is in Mr. Godman's collection; but the male remains still unknown.

7. **Thermonectes marmoratus.**

Colymbetes marmoratus, Hope, Anim. Kingd. 1832, p. 284, pl. 32. f. 1; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 683.
Hydaticus flavo-maculatus, Chevr. Col. Mex. fasc. i. no. 26.
Hydaticus marmoratus, Aubé, Spec. Gén. vi. p. 167.

Hab. MEXICO, Jalapa (*Höge*), Parada (*Boucard, coll. Sallé*), Ventanas, 2000 feet (*Fornt*); GUATEMALA, San Gerónimo (*Champion*); HONDURAS (*Sallé*).

This brightly-coloured species exhibits a considerable amount of variation in the size of the yellow marks of the wing-cases.

8. **Thermonectes margineguttatus.**

Acilius margineguttatus, Aubé, Spec. Gén. vi. p. 149; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 683.

Hab. MEXICO, Orizaba, Puebla, Vera Cruz, Jalapa (*Sallé*); GUATEMALA, Paso Antonio, 400 feet (*Champion*); PANAMA, David (*Champion*).—SOUTH AMERICA, from Colombia to Parana; ANTILLES.

9. **Thermonectes cinctatus.**

Acilius cinctatus, Aubé, Spec. Gén. vi. p. 151 [1].

Hab. MEXICO [1].

This was described by Aubé on a single individual, which I believe remains still unique. I doubt whether it will prove to be more than a variety of *Acilius margineguttatus*.

10. **Thermonectes basilaris.**

Dytiscus basilaris, Harris, New Eng. Farm. 1829, viii. p. 2; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 684.
Acilius incisus, Aubé, Spec. Gén. vi. p. 147 [1].

Hab. NORTH AMERICA, California, Texas.—MEXICO, Jalapa, Oaxaca, Las Vigas, Vera Cruz (*Höge*); GUATEMALA, Dueñas (*Champion*).—BRAZIL [1]; ANTILLES.

The species exhibits much variation in size, colour, and sexual sculpture in Central

America, as well as in the United States; no variety I have from the former of these localities displays such a great departure from the average as do some of the North-American forms. Aubé's record of the species from Brazil requires confirmation.

ERETES.

Eretes, Lap. Ann. Soc. Ent. Fr. i. p. 397; Crotch, Trans. Am. Ent. Soc. iv. p. 386.
Eunectes, Er. Gen. Dyt. p. 23; Aubé, Spec. Gén. vi. p. 123.

This genus comprises only two species. The one found in Mexico is one of the most cosmopolitan of insects, although it appears to be much rarer in the western than it is in the eastern hemisphere.

1. Eretes sticticus.

Dytiscus sticticus, Linn. Syst. Nat. ii. 666. 12; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 699.
Eunectes griseus, Aubé, Spec. Gén. vi. p. 124.

Hab. Fere in orbe toto. Mexico, San Luis Potosi (*Dr. Palmer*); Tres Marias Is. (*Forrer*).

This, the most widely distributed of the species of Dytiscidæ, appears to be comparatively rare in the New World. I am acquainted with only a few individuals from Mexico; and in South America it is recorded only from Peru.

MEGADYTES.

Megadytes, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 917.
Cybister (ex parte), Aubé, Spec. Gén. vi. p. 43.

This is a genus of about twenty species peculiar to the New World, in the southern parts of which it replaces *Cybister* of the Old World and North America.

1. Megadytes lævigatus.

Dytiscus lævigatus, Oliv. Ent. iii. 40, p. 14, pl. 3. f. 23; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 707.
Cybister lævigatus, Aubé, Spec. Gén. vi. p. 99.

Hab. Mexico, Vera Cruz; Guatemala, Torola 1000 feet, Paso Antonio 400 feet (*Champion*); Nicaragua, Chontales (*Belt*); Panama.—Brazil.

At the time I remarked on this species (*loc. supr. cit.*) I had seen only two or three Mexican individuals, among which were no males, and I remarked that the females in Mexico were usually nearly or quite destitute of sexual sculpture. In the series at present before me there is only a single Mexican female; and this has a small sexual sculpture, as have also two females from Chontales, while the unique individual of this sex from Guatemala is almost (but not quite) absolutely destitute of such sculpture. The males depart from the Brazilian individuals, inasmuch as they possess a superior development of the front tarsi, which are formed much as in *Megadytes flohri*. From

Panama I have seen three males, whose tarsi agree in structure with those of Brazilian examples.

2. **Megadytes flohri.**

Megadytes flohri, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 709.

Hab. Mexico, city of Mexico (*Flohr*), Vera Cruz (*Höge*), Cordova (*Sallé*).

The females in the small series of this species now before me are all destitute of any sexual sculpture, except that in two of them there exist ten or a dozen minute linear punctures clustered round the basal puncture of the internal series on the wing-case.

3. **Megadytes fraternus.**

Megadytes fraternus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 708.

Hab. Guatemala, Dueñas, San Gerónimo (*Champion*).—Antilles, Guadeloupe, St. Domingo; South America, Demerara.

4. **Megadytes fallax.** (Tab. I. fig. 13.)

Cybister fallax, Aubé, Spec. Gén. vi. p. 54[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 710.

Hab. Mexico (*Sallé*).—Cayenne [1].

This little-known species is represented in Sallé's collection by a single female labelled "*Trogus flavocinctus*;" this determination, however, was erroneous, and the specimen, a very fine one, agrees with the two other females, these being all that we know of the species.

5. **Megadytes obesus.**

Megadytes obesus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 710[1].

Hab. Panama [1].

6. **Megadytes giganteus.**

Cybister giganteus, Lap. Et. Ent. p. 99; Aubé, Spec. Gén. vi. p. 46; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 713[1].

Cybister lherminieri, Aubé, Spec. Gén. vi. p. 47.

Hab. ? Mexico [1], Merida in Yucatan (*Sallé*); Guatemala, San Gerónimo (*Champion*); Salvador (*Sallé*).—Brazil; Antilles, Guadeloupe, Antigua, Cuba.

CYBISTER.

Cybister, Curt. Brit. Ent. iv. p. 151; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 918.
Trogus, Leach, Zool. Misc. iii. p. 70 (1817).

This important genus is especially characteristic of the eastern hemisphere, where it

is very widely distributed, and possesses also three or four North-American species, but is quite absent from South America.

1. **Cybister fimbriolatus.** (Tab. I. fig. 14.)

Dytiscus fimbriolatus, Say, Trans. Am. Phil. Soc. ii. p. 91; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 715.

Cybister dissimilis, Aubé, Spec. Gén. vi. p. 69.

Hab. North America, from Pennsylvania southwards.—Mexico, Guanajuato (*Dugès, coll. Sallé*), Puebla, Toluca (*Sallé*), Vera Cruz, Oaxaca (*Höge*).

The species is apparently variable in Mexico. Only one of the individuals before me (the unique female from Guanajuato) resembles the North-American individuals; the other specimens are mostly referable to a well-marked variety of short form, with the yellow cincture broad, and with the breast green: of this variety I have not seen the female. A third form is represented by a single female from Vera Cruz; it is of elongate form, with very broad cincture, and apparently approximates greatly to the Californian *C. ellipticus*, Lec.

2. **Cybister flavocinctus.**

Cybister flavocinctus, Aubé, Spec. Gén. vi. p. 78[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 716.

Hab. North America, Texas.—Mexico, Corafalce[1] (*Madame Sallé*).

Fam. GYRINIDÆ.

This small family of Coleoptera is one of the most isolated of all those included in the order. All the species have the habit of swimming with extreme rapidity in complex curves on the surfaces of various waters, the Orectochilini being frequently found in pools in rapid mountain-streams, while the *Dineutes* group of genera select calmer waters for their habitat.

ENHYDRUS.

Enhydrus, Cast. Etud. Ent. p. 110; Aubé, Spec. Gén. vi. p. 651.

This is a genus with several species peculiar to South America; for although at present only two are recorded thence, yet certain species (*Gyrinus buqueti*, Aubé, e. g.) hitherto placed in *Gyrinus* belong rather to *Enhydrus*. The only other province from which species are recorded is New Holland; but Chili possesses two or three species allied to the Australian forms.

1. **Enhydrus atratus.**

Enhydrus atratus, Regt. Ann. Soc. Ent. Fr. (5) vi., Bull. p. ccxv.

Hab. Panama.

DINEUTES.

Dineutes, Macleay, Ann. Jav. p. 30; Aubé, Spec. Gén. vi. p. 761.

This is a genus of about forty described species, widely distributed in the warmer parts of the eastern hemisphere, but nearly or quite wanting in South America, although North America and the Antilles possess several peculiar species. Six species are here recorded from Mexico and Central America, three of which appear to be peculiar to the region, while the other three are intrusions from the North-American and West-Indian regions.

1. Dineutes discolor.

Dineutes discolor, Aubé, Spec. Gén. vi. p. 784.

Hab. North America, United States.—Mexico.

2. Dineutes solitarius.

Dineutes solitarius, Aubé, Spec. Gén. vi. p. 780.

Hab. Mexico, Jalapa, Orizaba, Tampico (*Sallé*); Guatemala, Guatemala city 5000 feet, and San Gerónimo (*Champion*); Nicaragua, Chontales (*T. Belt*).

3. Dineutes truncatus. (Tab. I. fig. 15.)

Dineutes truncatus, Sharp, Ent. Month. Mag. x. p. 54[1].

Hab. Mexico, Juquila (*Sallé*); Guatemala, San Gerónimo, Mirandilla (*Champion*); Nicaragua, Chontales[1] (*Belt*); Costa Rica, Cache, San Francisco 4000 feet, Irazu 6000 to 7000 feet (*Rogers*); Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

4. Dineutes sublineatus.

Gyrinus sublineatus, Chevr. Col. du Mex. fasc. i.

Dineutes sublineatus, Aubé, Spec. Gén. vi. p. 775.

Hab. Mexico, Jalapa, Orizaba (*Sallé*), Guanajuato (*Dugès, coll. Sallé*); British Honduras, river Sarstoon (*Blancaneaux*); Guatemala, San Gerónimo (*Champion*); Nicaragua, Chontales (*Belt*).

5. Dineutes vittatus.

Gyrinus vittatus, Germ. Ins. Sp. Nov. p. 32.

Dineutes vittatus, Aubé, Spec. Gén. vi. p. 768.

Hab. North America, United States.—Mexico.

6. Dineutes longimanus.

Gyrinus longimanus, Oliv. Ent. iii. 41, p. 11, pl. i. f. 3.

Dineutes longimanus, Aubé, Spec. Gén. vi. p. 782.

Hab. Costa Rica.—Antilles.

GYRINUS.

Gyrinus, Geoff. Ins. Par. i. p. 193 (1762); Aubé, Spec. Gén. vi. p. 655.

This is an extensive genus, very widely distributed, and with the species more than usually difficult to distinguish by good characters. North America is, perhaps, the richest of all countries in species of the genus; but Central America and South America seem to be inhabited by only a few species.

1. Gyrinus turbinator.

Latiusculus, nitidus, supra nigro-æneus vel chalybeus, margine elevato elytrorum versus apicem rufescente; subtus piceus, plus minusve ferrugineus, epipleuris pedibusque rufis; elytris subtiliter striato-punctatis, striis externis parum profundioribus, interstitiis nullomodo elevatis, apicibus truncatis.

Long. 3, lat. $1\frac{5}{8}$ lin.

Hab. Mexico, Puebla (*Sallé*); Guatemala, Quiche Mountains 7000 to 9000 feet (*Champion*).

This is a species allied to the North-American *G. ventralis*, but of rather broad form, and with the wing-cases more truncate and broader behind: the series of punctures are fine, but distinct and very regular, the outer a little more deeply impressed than those near the suture. The lateral margin near the extremity is rather broadly explanate, and is of an obscure red colour; the outer angle of the apex is very broadly rounded, the inner angle but little rounded; the transverse series of punctures fine but distinct. Beneath, the margins are red; but the colour of the body appears to vary from a piceous red to a clearer red—the two individuals from Mexico being paler than the others. The legs are pale red. The male tarsi are broad. In the female the surface of the elytra towards the extremity is not so shining as in the other sex, owing to an excessively minute sculpture.

2. Gyrinus obtusus.

Gyrinus obtusus, Say, Trans. Am. Phil. Soc. iv. p. 447 [1].

Hab. Mexico [1], Parada and Puebla (*Sallé*).

This species is readily distinguishable by the peculiar structure of the apices of the wing-cases; the side margin at the extremity is expanded and depressed, and the outer angle is broadly bent downwards. In some individuals the alternate interstices are elevated. It is distributed in collections under the name of *Gyrinus plicatus*, Sallé; but it appears to me likely to be the species Say described as above.

3. Gyrinus parcus.

Gyrinus parcus, Say, Tr. Am. Phil. Soc. iv. p. 448 [1]; Aubé, Spec. Gén. vi. p. 701.

Hab. North America, Texas.—Mexico [1], Orizaba, Cordova, Parada, Jalapa (*Sallé*); Guatemala, Guatemala city 5000 feet, San Gerónimo (*Champion*); Nicaragua, Chontales (*Belt*).

This is apparently one of the most abundant beetles in Mexico and Guatemala. There is a considerable difference in the sexes, the female being usually larger than the male, and having the interstices, with the exception of those near the suture and the outer one, dull, on account of an excessively minute scnlpture.

GYRETES.

Gyretes, Brullé, Hist. Nat. v. p. 241; Aubé, Spec. Gén. vi. p. 747.

This is a genus of about twenty species, confined to the New World, where they occur in the Antilles and in continental America from the southern and western portions of the United States of North America to Brazil. M. Sallé has made known that some of the species inhabit mountain-torrents, and are able to leap a considerable distance, when taken out of their native pools, by the aid of their very flexible terminal segments.

1. **Gyretes leionotus.** (Tab. I. fig. 16.)

Gyretes leionotus, Aubé, Spec. Gén. vi. p. 753.

Hab. Mexico, Orizaba (*Sallé*); Guatemala, Torola 1000 feet (*Champion*).

Although the individuals found in Guatemala are uniformly smaller and narrower than the Mexican examples, yet I can find no specific characters to distinguish them.

2. **Gyretes boucardi.**

Gyretes boucardi, Sallé, MS.

Ovalis, angustulus, æneo-niger, antennis ex parte pedibusque rufis; subtus piceus, elytrorum margine inflexo rufo; thoracis elytrorumque lateribus dense subtiliter punctatis et pubescentibus, horum apice truncato, margine laterali ad finem obtuso.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{4}$ lin.

Mas nitidissimus.

Fem. subnitida, elytris obsolete longitudinaliter impressis.

Hab. Mexico, Playa Vicente (*Sallé*).

This species is closely allied to *G. leionotus*, but is considerably smaller, and the female is much less opaque. In the male the pubescent border on the wing-cases is quite narrow in front; but in the female it is much broader. Although the upper surface in the female is dulled by a very fine peculiar sculpture, yet this sculpture becomes quite obsolete, or even absent, on the front of the elytra and on the thorax.

3. **Gyretes levis.**

Gyretes levis, Brullé, Voy. d'Orb. vi. p. 52[1]; Aubé, Spec. Gén. vi. p. 757[2].

Gyretes saltatrix, White, Cat. Hyd. Brit. Mus. p. 48[3].

Hab. Guatemala, Paso Antonio, 400 feet (*Champion*).—South America, Brazil[1 2], Colombia[3].

4. Gyretes proximus.

Ovalis, convexus, nigro-æneus, nitidissimus; thoracis elytrorumque lateribus dense punctatis et pubescentibus; subtus piceus, elytrorum margine inflexo pedibusque rufis; elytris apice truncato, extus leviter obliquo, angulo externo obtuso, margine laterali ibidem perparum prominulo.
Long. 3–3½, lat. 1½ lin.

Hab. Costa Rica (*Van Patten*).

This species agrees almost exactly with Aubé's description of *Gyretes morio* (from Guadaloupe), except in the form of the apices of the wing-cases, which are here more obtuse. The pubescent border of the elytra is narrow at the shoulder, but just behind that gets broader, so that before the middle it is already wide, and towards the apex covers fully one half of the surface; at its termination it just attains the suture. The male has the anterior tarsi very broad; and the female is shining like the male; but the anterior parts of the pubescent border are rather broader in the female.

5. Gyretes acutangulus.

Ovalis, valde convexus, nitidissimus; thoracis elytrorumque lateribus dense punctatis et pubescentibus; subtus piceus, elytrorum margine inflexo pedibusque rufis; elytris apice fere recte truncato, angulo externo leviter prominulo, acute recto.
Long. 3½, lat. 1⅝ lin.

Hab. Mexico, Puebla (*Sallé*).

The band of pubescence on the side of the wing-case is narrow, and continues quite of one width till near the extremity, when it is rather abruptly dilated, and quite behind touches the apex somewhat narrowly. The lateral margin of the wing-case is quite distinctly red on the posterior portion, and at the apex projects a little so as to form a very sharply-marked right angle. The male anterior tibiæ and tarsi are but little dilated; and the female is very shining like the male, and has no greater development of the pubescence at the margins.

Fam. HYDROPHILIDÆ.

The family Hydrophilidæ consists of about 600 species, the majority of which are aquatic in their habits; nevertheless the family certainly cannot be correctly associated with the other aquatic families Haliplidæ, Dytiscidæ, and Gyrinidæ in the Adephagous series; it is indeed the first of a series of families of beetles that at present have not been satisfactorily combined in larger aggregates capable of exact definition; some of these families comprise but a few species, and therefore exhibit but little variety of structural characters, while others are of greater extent and may be looked on as really equivalent in value to such families as the Carabidæ. The Hydrophilidæ is intermediate in extent between these two extremes, but will probably become a family of even greater extent and importance than the Dytiscidæ; for the last-named family is rich in species in the waters of the more frigid portions of the earth's surface, while this is not the case with the Hydrophilidæ, whose species appear to be more numerous in the warmer regions. The species of this family, except those of Europe and North America, have been and are much neglected by collectors and students; and this is, in fact, the first time that any thing like a complete enumeration of the Hydrophilideous fauna of any considerable geographical region, other than the two just named, has been attempted. About 120 species have been already ascertained to be found in Mexico and Central America; and although this number will no doubt be very largely increased, it is even at present about equal to the number of species of the family known to inhabit America north of Mexico.

The classification of the family is in a very imperfect and unsettled stage, there being no conformity of opinion as to the number or limits of the tribes to be adopted in it, while the primary division of the family into two groups, Hydrophilini and Sphæridiini, based on the comparative length of the joints of the hind feet, proves on examination to be quite untenable. Under these circumstances I have not thought it necessary for the purposes of this work to make use of any true classification, but simply to arrange the genera in conformity with the order in which they appear in the Munich Catalogue of Coleoptera; in this arrangement the species most profoundly modified for aquatic existence come first, and the terrestrial members of the family are placed at the end. Some authors make of the family Hydrophilidæ a series termed Palpicornia, supposed to be the equivalent of the Adephaga, while the minor divisions of the family are made to represent the families of the Adephagous series; this course, however, has nothing to recommend it, except an appearance of uniformity gained at the expense of accuracy.

HYDROPHILUS.

Hydrophilus, Geoffroy, Ins. Par. i. p. 180.
Hydrous, Leach, Zool. Misc. iii. p. 92.

This genus comprises about forty species, and has a wide distribution in both the eastern and western hemispheres.

1. **Hydrophilus insularis.** (Tab. II. fig. 1.)

Hydrophilus insularis, Cast. Hist. Nat. ii. p. 50 [1].
Hydrophilus pilatei, Dupt. in litt.

Hab. North America, Texas, California.—Mexico, Misantla (*Höge*), Puebla, Yucatan (*Sallé*), Presidio (*Forrer*); Guatemala, San Gerónimo (*Champion*).—Antilles [1], Cuba [1], Guadaloupe [1].

The figure represents a specimen from Misantla.

2. **Hydrophilus triangularis.**

Hydrophilus triangularis, Say, Journ. Ac. Phil. iii. p. 201 [1]; Lec. Proc. Ac. Phil. 1855, p. 367 [2].

Hab. North America, from New York [2] to California [2].—Mexico, Misantla (*Höge*), Parada (*Sallé*), San Luis Potosi (*Dr. Palmer*).

3. **Hydrophilus ater.**

Hydrophilus ater, Fabr. Ent. Syst. i. p. 183 [1]; Oliv. Ent. iii. 39, p. 10, t. 2. f. 6 [2].
Hydrophilus brasiliensis, Cast. Et. Ent. p. 50 [3]; Hist. Nat. ii. p. 50 [4].

Hab. North America, Philadelphia, Texas.—Mexico, Misantla, Vera Cruz (*Höge*), Orizaba (*Sallé*); Guatemala, Paso Antonio 400 feet (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Costa Rica (*van Patten*).—Antilles, Cuba; South America [1], Colombia, Cayenne, Brazil [4], Bahia.

A species so largely distributed as is this one is sure to show some variation; and in the equatorial region the individuals of this species appear to be usually larger and broader than they are more to the north; the northern specimens usually have the sternal spine rather shorter than those from the south: but these slight characters are very variable. The Central-American specimens always have the apices of the wing-cases quite without acumination; but in the South-American individuals it is usually found (when the elytra are made to gape a little) that each extremity at the suture is slightly emarginate inwardly, so that there is a very minute sharp angle: but this small character is likewise a variable one.

TROPISTERNUS.

Tropisternus, Solier, Ann. Soc. Ent. Fr. 1834, p. 308.

This is a genus characteristic of the New World, where it has a very wide distribu-

tion, extending from the north of the United States to Uruguay. About thirty-five species are known: of this number five are peculiar to America north of Mexico, two are common to North America and more southern regions, South America has fourteen or fifteen species, and two or three are known from the Antilles.

1. **Tropisternus collaris.**

Hydrophilus collaris, Fabr. Syst. Ent. p. 229[1].
Tropisternus collaris, Cast. Hist. Nat. ii. p. 54[2].

Hab. MEXICO (*coll. Saunders*); PANAMA.—ANTILLES, St. Domingo; SOUTH AMERICA, from Caraccas to Entre Rios, Brazil[2].

2. **Tropisternus mexicanus.** (Tab. II. fig. 3.)

Tropisternus mexicanus, Cast. Hist. Nat. ii. p. 54[1].

Hab. MEXICO[1], Jalapa, Oaxaca (*Höge*), Vera Cruz (*Sallé*); GUATEMALA, Cubilguitz, Paso Antonio 400 feet (*Champion*); NICARAGUA, Chontales (*Belt & Janson*).

Although very closely allied to the South-American *T. collaris*, I believe, from the examination of a large number of specimens of both species, that *T. mexicanus* is truly distinct. It has seven green lines on each wing-case (including a sutural one) separated by very narrow yellow spaces; while in *T. collaris* there are five such lines; and in this latter species the second and fourth yellow interstices are filled behind by short green lines which connect, by overlapping, with the extremities of the adjacent green lines, which are more or less abbreviated. The Mexican insect has likewise less powerful hind legs. The green mark on the middle of the thorax is but little variable in its extent, but it is generally rendered more or less indistinct by being surrounded with a cloud of dark colour of very variable size; and it is to such individuals that Castelnau's description refers.

A specimen from Vera Cruz is figured.

3. **Tropisternus apicipalpis.** (Tab. II. fig. 2.)

Hydrophilus apicipalpis, Chevr. Col. Mex. fasc. 3[1].
Tropisternus apicipalpis, Cast. Hist. Nat. ii. p. 53[2].

Hab. MEXICO, Jalapa (*Höge*), Tuxtla and Vera Cruz[2] (*Sallé*); NICARAGUA, Chontales (*Belt*); COSTA RICA (*van Patten*).

A Jalapa specimen is figured.

4. **Tropisternus chalybeus.**

Tropisternus chalybeus, Cast. Hist. Nat. ii. 53[1].

Hab. MEXICO, Oaxaca (*Höge*), Tuxtla, San Andres (*Sallé*); NICARAGUA, Chontales (*Belt*); PANAMA.—ANTILLES, Guadaloupe, Brazil[1].

5. **Tropisternus crassus.**

Robustus, latus, convexus, niger, superne viridi-violaceo micans, antennarum basi palpisque testaceis, pedibus piceis; his crassis parum elongatis, femoribus intermediis et posterioribus subtus ex parte majore pubescentibus; abdominis apice spina elongata armato.

Long. 11, lat. $6\frac{1}{2}$ mm.

Hab. GUATEMALA, Torola 1000 feet (*Champion*).

This insect, although closely allied to *T. nitidus*, is distinguished by a comparatively shorter form, less attenuate behind; it also has the hind legs shorter and stouter, and their femora have a larger portion of their area covered with pubescence, this pubescence extending a little more than halfway to the apex, while in *T. nitidus* the extension is a little less than halfway. It is one of a group of species extremely difficult to distinguish from one another, and of which several are found in South America; but none of the South-American individuals I have seen agree with the four individuals found by Mr. Champion.

6. **Tropisternus brevicollis.** (Tab. II. fig. 4.)

Subdepressus, subellipticus, sat elongatus, niger, subæneo-micans, fere impunctatus; spina sternali fere brevi, lata, deplanata, parum punctata; femoribus area parva pubescente, tibiis posterioribus haud ciliatis; elytrorum linea pleurali omnino lævigata; abdominis apice in medio carina sat elongata perparum elevata.

Long. $5\frac{1}{2}$, lat. 3 lin.

Hab. MEXICO (*coll. Sharp*), Ventanas 2000 feet (*Forrer*).

This is a very distinct and peculiar species, with unusually short thorax, and with the sculpture of the upper surface much diminished, and with very short palpi. The usual looped series of punctures on each side of the head is wanting, or rather only the external portion of the series (near the antennæ) exists; and at the margin of the eye there is only a single large puncture. The usual minute punctuation of the head and thorax is scarcely to be detected; and the wing-cases too are nearly destitute of punctuation. The epipleural margin is entirely without punctures or spines.

I have a specimen of this peculiar species from Laferté's collection; and recently two others have been received from Mr. Forrer, one of which is figured. These two latter have the joints of the maxillary palpi black, but marked with yellow.

7. **Tropisternus nitens.**

Tropisternus nitens, Cast. Hist. Nat. ii. p. 54[1].

Hab. MEXICO, Oaxaca (*Höge*), Juquila, Cordova, Vera Cruz[1] (*Sallé*), Ventanas 2000 feet (*Forrer*); GUATEMALA, Purula, San Gerónimo, Paso Antonio 400 feet, Torola 1000 feet, Pantaleon 1700 feet (*Champion*); NICARAGUA, Chontales (*Belt & Janson*).—SOUTH AMERICA, from Caraccas to Rio de Janeiro.

This species is variable in size and form and in the details of colour, but may be

recognized by its small or rather small stature, by the absence of swimming-cilia on the hind tibiæ, by the short, or rather short, middle and hind legs, which are armed with numerous and conspicuous spines, by the epipleural margin being punctate from the shoulder to near the extremity, and by the rather large size of the pubescent area at the base of the hind femora. The variation in the Central-American individuals is considerable; but I have been unable to detect any constant characters indicative of there being more than one species.

8. **Tropisternus ovalis.** (Tab. II. fig. 5.)

Tropisternus ovalis, Cast. Hist. Nat. ii. p. 54[1].

Hab. Mexico, Vera Cruz (*Höge*); Guatemala, Paso Antonio 400 feet (*Champion*).—South America, Colombia, Brazil [1].

This species is an easily recognized one, and may readily be distinguished, independently of the small stature and peculiar form of its individuals, by the greater elongation of the sixth, or ear-like, joint of the antenna, and its shorter sternal spine. It varies a good deal in colour. A specimen from Paso Antonio is figured.

9. **Tropisternus concolor.**

Ovalis, latiusculus, posterius haud acuminatus, nitidissimus, subtilissime punctulatus, niger (interdum superne subænescens); pedibus posterioribus brevibus, ex parte majore nigris, tibiis ciliatis; margine epipleurali a basi fere ad apicem punctato; carina sternali lævigata; abdominis apice ecarinato; femoribus basi parum late pubescente.
Long. 4–5, lat. $2\frac{1}{2}$ lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*), Parada (*Sallé*), Oaxaca (*Höge*), Hacienda de Bleados, San Luis Potosi (*Palmer*); Guatemala, Guatemala city 5000 feet (*Champion*); Costa Rica (*van Patten*).

Mentum quite sparingly punctured. Base of antennæ and palpi yellow, the tip of the latter dusky. Upper surface very shining, very feebly punctate, so that on the wing-cases scarcely any punctuation can be detected. Sternal carina almost impunctate. Apex of the hind body without any carina; but there exists a perceptible elevation bearing two or three minute hairs. Legs black, but the femora marked towards the extremity with yellow, and the upper face of the tibiæ sometimes with a yellow streak; the front tibiæ nearly or entirely yellow.

The species is allied to the South-American *T. nitidulus*, Brullé; but that insect is of feebler build, with more slender legs and smaller head, and has the upper surface more distinctly punctulate.

10. **Tropisternus chontalensis.**

Latus, parum convexus, posterius haud attenuatus, nitidissimus, niger vix metallice micans, subtilissime punctatus; pedibus gracilibus, piceis, anterioribus ex parte majore testaceis, femoribus posterioribus rufo signatis; margine epipleurali anterius impunctato, posterius angusto crebre punctato; spina metasternali

lata, parum elongata; femoribus ad basin sat late pubescentibus; tibiis posterioribus haud ciliatis, facie interna superne serie punctorum delimitata; abdominis apice valde carinato, carinæ apice parum spinoso-producto.

Long. $5\frac{1}{2}$, lat. 3 lin.

Hab. NICARAGUA, Chontales (*Janson*).

This is one of a series of species in which the posterior tibiæ are without swimming-hairs, but have their smooth inner face traversed at the upper edge by a closely placed series of punctures, each of which bears a spine, the basal spines being coarse and depressed, while those at the apex are fine and erect or suberect, so as to be like extremely short coarse hairs. The sternal spine is short and rather flat, projecting, however, distinctly a little beyond the hind margin of the basal ventral segment; it is but little punctate; and its apex bears two or three minute setæ. The last ventral segment is armed with a very strongly elevated carina, the apex of which is free, however, only for a short distance, so that it is but little spinose.

11. **Tropisternus oculatus.** (Tab. II. fig. 6.)

Superne olivaceus æneo tinctus, antennarum basi palpisque testaceis; pedibus rufis, femoribus basi nigra; subtilius punctatus, pernitidus; oculis majoribus, valde convexis; elytrorum linea marginali subtiliter crenato-punctata, punctis pone humeros minutis; abdominis apice longius spinoso.

Long. $5\frac{1}{2}$–6, lat. 3 lin.

Hab. MEXICO, Presidio (*Forrer*).—SOUTH AMERICA, Colombia (*coll. Sharp*).

The species may be readily distinguished from all others known to me by the larger eyes; the colour appears to vary but little, if I may make such a statement on the authority of an inspection of but few examples. The ventral spine is remarkably elongate. The male has a slender tooth, placed near the base of the under claw on the middle and hind feet. In an individual labelled "Nov. Grenada," the systematic punctures near the side of the thorax are not concentrated into so minute a space as they are in the other individuals.

A specimen from Presidio is figured.

12. **Tropisternus fuscitarsis.**

Sat latus et convexus, posterius subattenuatus, nitidissimus, niger; pedibus plus minusve rufo variis; crebre subtilius punctulatus; margine pleurali basi impunctato, pone medium angusto sed crebre punctato; pedibus posterioribus modice elongatis, tibiis ciliatis, femoribus ad basin area parva pubescente; spina sternali sat elongata, acuminata, lævigata; abdominis apice fere mutico.

Long. $4\frac{1}{2}$–$5\frac{1}{2}$, lat. $2\frac{1}{2}$–3 lin.

Hab. MEXICO, Oaxaca, Jalapa (*Höge*), Cordova, Parada (*Sallé*); GUATEMALA, Guatemala city 5000 feet (*Champion*); NICARAGUA, Chontales (*Janson*).

This species varies somewhat in colour, the upper surface having sometimes an obscure metallic reflection, and the legs being occasionally nearly entirely red; but the characters mentioned in the above diagnosis are distinctive when this species and *T. concolor* are compared. *T. fuscitarsis* is more elongate, has the surface a little more

distinctly punctulate, the sternal spine shorter, the pubescent area on the hind femora a little smaller, and the epipleural margin without punctures on the basal portion. Mexican individuals of the species are distributed in collections under several different MS. names (*T. fuscitaris*, Kl., *T. signatipes*, Sturm, *T. dubius*, Deyr.), specimens of other species being, however, mixed with them.

13. **Tropisternus xanthopus.**

Ovalis, parum latus, sat elongatus, posterius subattenuatus, nitidus, superne virescens; antennarum basi, palpis pedibusque flavis, femorum basi tarsisque fuscis; subtiliter punctulatus, elytrorum lateribus, præsertim versus apicem, magis conspicue punctatis; elytrorum linea pleurali subtiliter punctata, punctis in parte basali ommino minutis; pedibus posterioribus gracilibus, femoribus area parva pubescente, tibiis ciliatis; spina sternali elongata, gracili, acuta, lævigata; abdominis apice vix carinato.
Long. $5\frac{1}{2}$, lat. $2\frac{1}{2}$ lin.

Hab. MEXICO, Oaxaca (*Höge*), Cordova (*Sallé*).

The labrum is either yellow or fuscous yellow; the mentum black, with a slight metallic tint; the mesosternal carina is more or less flavescent; the sternal spine quite slender. The lateral margin or pleural line of the wing-case is fine, and is very finely punctured at the base, behind the middle more distinctly, but yet finely.

I have before me only four individuals that I can with certainty refer to this species; they are all males, and have the mentum shining and somewhat coarsely punctate. Some other individuals in the collection may possibly be the female of this species, or may be a closely allied species; but the specimens I refer to are in such a bad condition of preservation that I cannot decide the point.

Although closely allied to *T. fuscitarsis*, *T. xanthopus* appears to me undoubtedly distinct; it is of narrower form, with more curved outline, with the upper surface metallic, the legs pale, the mentum more punctate, the sternal spine longer and more slender, and the pleural margin finely punctate at the base.

14. **Tropisternus tinctus.**

Ovalis, parum convexus, posterius parum acuminatus, pernitidus, niger, superne plus minusve viridi vel violaceo tinctus, labro pedibusque testaceis; subtiliter punctulatus; pedibus posterioribus gracilibus; femoribus area parva pubescente, tibiis ciliatis; elytrorum margine pleurali omnino impunctato, epipleura minus abrupte inflexa; spina sternali elongata, gracili, acuta, lævigata; abdominis apice vix carinato.
Long. 5, lat. $2\frac{2}{3}$ lin.

Hab. MEXICO, Oaxaca, Jalapa (*Höge*).

Although very similar to *T. fuscitarsis* and to *T. californicus*, this species is readily distinguished by the marginal or pleural line of the wing-case being without sculpture; not the least trace either of punctuation or spines can be detected on this part. Moreover, when the junction of the epipleura with the body of the wing-case is examined from beneath, it is seen that this part is more rounded than in the allied species, so that the edge of the wing-case below appears to be blunter, or less like a cutting-edge.

In the male the mentum and the lateral portions of the submentum are quite dull, owing to a very dense, fine, rugulose punctuation, while in the female these parts are shining and rather finely and moderately closely punctate.

15. **Tropisternus lateralis.**

Hydrophilus lateralis, Fabr. Syst. Ent. p. 228 [1].
Tropisternus lateralis, Cast. Hist. Nat. ii. p. 53 [2]; Lec. Proc. Ac. Phil. 1855, p. 367 [3].
Hydrophilus nimbatus, Say, Journ. Ac. Phil. iii. p. 203 [4].

Hab. North America [4], from New York southwards.—Mexico, Jalapa, Oaxaca (*Höge*), Parada, Guanajuato (*Sallé*); Guatemala, Dueñas, San Gerónimo, Cubilguitz (*Champion*), Guatemala city 5000 feet (*Salvin, Champion*).—Antilles, Cuba, Antigua; South America [1 2], to Monte Video.

This species is very variable; and I am by no means certain that it does not consist of several very similar and rather variable species; but as, after several days devoted to examination of specimens from various localities, I am unable to arrange them as separate species in a satisfactory manner, I am obliged at present to treat all the forms as one species. The variations in Mexico and Central America affect the size, colour, form, and sculpture, and the existence or absence of a marked ventral spine at the extremity of the hind body. The colour of the upper surface varies from a very dark obscure fuscous brassy colour to a brilliant brassy green; the yellow cincture is sometimes very broad; and in such case the individuals approach very closely indeed to the Californian *T. limbalis*, Lec.; at other times it is very narrow. In many of the darker individuals there is a pair of lines of large punctures near the margin of the wing-cases, and others near the suture. The last ventral segment shows a prominence at the extremity, which is sometimes so slight as to be readily overlooked, while in others it forms on the apical part of the segment an abruptly elevated fold, the extremity of which projects, to a greater or less extent, as a short free spine; this latter is not a sexual character: but it is subject to a slight amount of variation according to sex; for although males may be found without the carina, and females with the carina strongly developed, yet if specimens from the same locality, quite agreeing in other respects, be selected and examined, it is found that the males have the carina and spine on the whole more conspicuous than it is in the females.

16. **Tropisternus obscurus.** (Tab. II. fig. 7.)

Brevior, convexus, posterius attenuatus, niger, subænescens, pedibus piceis; subtilius punctulatus; pedibus posterioribus crassiusculis, femoribus area pubescente parva, tibiis ciliatis; spina sternali elongata, acuminata, lævigata; margine pleurali omnino impunctato; abdominis apice subtuberculato, nullomodo carinato.

Long. 5, lat. $2\frac{7}{8}$ lin.

Hab. Guatemala, Dueñas (*Champion*).

This species is of shorter form and more attenuate behind than its allies here described, and is readily distinguished by this and the characters above mentioned. The series of about two dozen individuals shows very little variation. The specimens are in very decayed condition; so that the colour of the legs perhaps appears more obscure and concolorous than is natural. Although resembling *T. tinctus* in the absence of sculpture and spines from the marginal border of the wing-cases, *T. obscurus* is nevertheless quite different in colour, form, and appearance, and possesses a structure of the epipleura which is peculiar to it: if the wing-cases be opened so that the inflexed epipleura can be seen, it will be observed that, although very broad at the base, it ceases or thins away about the middle; whereas in *T. tinctus* and other species it continues broad beyond the middle, although it is completely folded in and applied to the inner face of the wing-case.

HYDROCHARIS.

Hydrochare, Latreille, Fam. Nat. p. 366.
Hydrophilus, Leach, Zool. Misc. iii. p. 94.
Hydrous, Brullé, Hist. Nat. Col. ii. p. 275.

This genus has a very wide distribution in the two hemispheres, and comprises about twenty described species.

1. **Hydrocharis perfectus.** (Tab. II. fig. 8.)

Oblongo-ovalis, parum convexus, nitidus, niger; pedibus piceis, antennarum basi palpisque testaceis; elytris subtiliter seriatim punctatis, nullomodo striatis; prosterno in medio anterius parum producto, obtuso, posterius angulum acutissimum formante, sed vix spinoso.
Long. 18, lat. 7½ millim.

Hab. Guatemala, Torola 1000 feet (*Champion*).

Palpi very elongate. Antennæ with the sixth joint forming a very elongate spoon, seventh elongate and with long ramose process. Head rather finely and not densely punctate, and with the larger punctures on the clypeus numerous. Thorax finely punctate, its anterior angles rounded and very little produced. Elytra with four isolated series of punctures, but without any striæ near these, also with punctures near the sides, the surface generally only obsoletely punctate. Posterior femora quite impunctate beneath. Apical ventral segment with quite narrow shining space at the extremity.

OOCYCLUS.

Caput subhemisphæricum. Antennæ perbreves, 8-articulatæ, articulis tribus ultimis abrupte majoribus, clavam laxam formantibus. Palpi maxillares perbreves, articulo ultimo quam præcedens paulo longiore. Mesosternum ante coxas intermedias in processum magnum scabrosum elevatum. Metasternum subtilissime pubescens. Abdomen e segmentis quinque compositum, nitidum, crebre setosum. Femora subtus nitida. Tarsi posteriores tenues, lineares, tibiis multo breviores, 5-articulati, articulo basali quam secundus multo breviore.

I propose this genus for some peculiar Palpicorns allied to *Hydrobius*, but differing

in numerous characters, and, owing to their size and hemispherical form, having a superficial resemblance to *Cyclonotum*. The antennæ are very short, the basal joint reaching but little beyond the side of the head; the second joint is very closely connected with it, appears, indeed, to be only incompletely divided from it, and is longer than its exposed portion; the third and fourth joints are very minute, while the fifth forms an obscure auricular appendage to the base of the very laxly articulated club. The maxillary palpi are stout and very short, the apical joint about equal in length to the second joint, while the third joint is considerably shorter; the mandible is so abruptly curved that its apical portion forms a long slender process placed at right angles to the broad basal portion, and is bifid at the extremity; the mentum is large, flat, smooth and shining, and nearly truncate at the extremity; the labial palpi are small. The prosternum and front coxal cavities are formed much as in *Hydrobius*; the former is rather obscurely carinate along the middle. The mesosternum bears in front of the coxæ a large prominence elevated to the level of the metasternum, and having its lower face scabrous. The metasternum sends off in the middle in front an elongate slender process separating the middle coxæ and articulating with the mesosternal process; the breast is finely pubescent; but the femora are glabrous beneath, except that the middle ones bear some coarse punctures and rough setæ. The tibiæ are armed with long spines. The ventral segments are shining and bear rather numerous fine, erect hairs.

The characters are drawn from *O. brevicornis*. The genus is in certain respects one of the most interesting of the Hydrophilidæ; the sculpture of the upper surface in *O. brevicornis* and *O. vestitus* is remarkable; and the maculation of the surface in *O. maculatus* with brilliant metallic spots is unique. I am not acquainted with any species other than those here described; and they all three appear to be rare, two of them, indeed, being unique.

The nearest ally of the genus is probably the genus or subgenus *Anacæna*, C. J. Thoms.; but *Oocyclus* differs by the absence of the fine pubescence on the femora and ventral segments, and by the structure of the pieces at the middle of the breast, which approximate much to the structure of these parts exhibited by *Cyclonotum*.

1. Oocyclus vestitus.

Subrotundus, supra viridescens, crebre irregulariter punctatus, in thorace elytrisque setulis sat elongatis haud dense vestitus; palpis antennisque testaceis, pedibus rufis; prosterno carinato, mesosterno lamina magna irregulari armato.

Long. 2, lat. $1\frac{1}{4}$ lin.

Hab. Mexico, Orizaba (*Sallé*).

Head very short and broad, closely and rather coarsely punctate; palpi yellow, stout, and very short, considerably shorter than the antennæ. Thorax forming a continuous outline with the afterbody, much narrowed towards the front in a curve, the surface evenly, moderately closely and coarsely punctate, and bearing rather numerous fine

depressed setæ. Elytra irregularly punctate, bearing indistinct irregular series of punctures, and with numerous other punctures, these latter being finer; the seriate and subseriate punctures bear rather long setæ. Legs rather short, the tarsi very feeble, the tibiæ strongly spinose; the breast closely and finely punctate-pubescent, the ventral segments shining, only very sparingly punctate-pubescent.

This peculiar insect, of which only a single example is known, is highly remarkable from the sculpture and pubescence of the upper surface, these being such as may be seen in other families of Coleoptera, but never, except in itself, amongst the aquatic Hydrophilidæ. Although evidently closely allied to *O. brevicornis*, it is doubtful whether the species may quite agree with it in its structural characters; but the individual is in such condition that I fear to submit it to a more detailed examination.

2. **Oocyclus brevicornis.** (Tab. II. fig. 9.)

Rotundato-ovalis, supra nigro-æneus, nitidus, sublævigatus, prothorace ad angulos anteriores flavescente; subtus vel niger, vel rufescens; pedibus rufis, antennis palpisque flavis, illarum clava fusca; elytris punctis minutis, setigeris, in seriebus sex locatis.
Long. $1\frac{3}{4}$, lat. $1\frac{1}{8}$ lin.

Hab. GUATEMALA, Rio Naranjo 450 feet, San Gerónimo (*Champion*).

Head very finely and sparingly punctate, with an irregular series of more distinct punctures along the inner margin of the eye. Thorax nearly impunctate on the middle, at the sides sparingly and irregularly punctate, with fine piligerous punctures arranged so as to sketch out in an irregular manner the curved series of punctures seen in many other Hydrobiini. Scutellum impunctate. Elytra without sutural stria, but with six longitudinal series of very fine piligerous punctures, one of which is sutural, and the outer is less distinct and regular than the others; these series do not consist of a single regular line of punctures, but the punctures are placed irregularly, only extending, however, over a very small space in the transverse direction; along the middle of the broad spaces separating these series there are a few very fine piligerous punctures. The prosternum is finely carinate along the middle, and in front bears two stout, curved, rigid setæ or spines, which, however, are easily removed. The colour of the undersurface varies from a rufescent to a nearly black tint.

3. **Oocyclus maculatus.**

Ovalis, valde convexus, supra æneo-niger, nitidus, prothorace ad angulos anteriores flavescente, elytris viridi maculatis; subtus rufescens; antennarum basi, palpis, pedibusque flavis; corpore supra sparsim punctato, elytris sine punctis seriatis.
Long. $1\frac{1}{4}$, lat. $\frac{7}{8}$ lin.

Hab. GUATEMALA, Cerro Zumil, 4000 to 5000 feet (*Champion*).

Head very short and broad, quite distinctly though rather sparingly punctate. Thorax on the disk more sparingly and finely punctate than the head, the punctuation at the

sides rather more distinct. Elytra of a dark brassy colour, with rather numerous spots of a delicate green colour; they are without a sutural stria, and are sparingly and rather finely punctate.

The only individual sent by Mr. Champion of this species is in a fragile condition, but seems to be closely allied in structure to *O. brevicornis*; the abbreviation of the palpi is extreme; the prosternum is only very finely carinate, and the two spines with which it is armed in front are quite minute; the front coxæ are destitute of spines.

HYDROBIUS.

Hydrobius, Leach, Zool. Misc. iii. 1817, p. 92.

Considerable discrepancy of opinion exists as to the extension to be allowed to this genus, many authors (probably with reason) separating from it the genera *Paracymus* and *Anacæna* of C. J. Thomson. I have, however, decided here, merely as a matter of temporary convenience, to use the generic name in its wider sense, as is done in the Munich Catalogue of Coleoptera. As thus understood it consists at present of some forty or fifty species distributed in most of the temperate parts of the world, but scarcely entering the tropics. I here register three species under the name, all of them belonging to the group or subgenus *Paracymus*.

1. **Hydrobius subcupreus.**

Hydrophilus subcupreus, Say, Journ. Acad. Phil. v. p. 189[1].
Hydrobius subcupreus, Lec. Proc. Ac. Phil. 1855, p. 373[2]; Horn, Tr. Am. Phil. Soc. xiii. p. 135[3].

Hab. North America[2], from Canada and Oregon southwards.—Mexico, Guanajuato (*Dugès, coll. Sallé*); Guatemala, Dueñas and Guatemala city, Paso Antonio, Quiche Mountains 7000 to 9000 feet (*Champion*); Nicaragua, Chontales (*Janson*).

The specimens before me show much variation in size; but I have not been able to find any satisfactory character of specific distinction; the individuals from Chontales and Paso Antonio form, however, a well-marked variety, characterized by very small size and more finely punctate upper surface. The front, or free angle, of the mesosternal lamina projects downwards in this species as a sort of tooth or spine.

2. **Hydrobius armatus.**

Oblongus, sat convexus, supra ænescens, nitidus; antennarum basi palpisque testaceis, his apice leviter infuscato; prothoracis lateribus anguste, elytrorum apice late flavescentibus; pedibus rufo-testaceis, elytris parce obsolete punctatis.
Long. 1, lat. $\frac{1}{2}$ lin.

Hab. Guatemala, Dueñas, Cahabon (*Champion*); Nicaragua, Chontales (*Janson*).

Upper surface of a brilliant brassy colour; the head indistinctly punctate, the thorax almost impunctate, the elytra very sparingly and somewhat obsoletely punctate and with

an elongate sutural stria. Legs red, with the tibiæ and tarsi pale, the latter very slender. The prosternum is distinctly carinate along the middle, the anterior portion of the carina projecting so as to form a well-marked angle; the mesosternum bears a lamina which extends very far forwards, its anterior margin ascending in a curve to the front of the middle of the mesosternum.

This minute beetle is allied to *H. subcupreus*, but is readily distinguished by the sparse punctuation of the upper surface and the extreme development of the mesosternal lamina.

3. **Hydrobius debilis.**

Ovalis, posterius subattenuatus, parum convexus, nitidus niger; prothoracis elytrorumque marginibus lateralibus, pedibus, antennarum basi palpisque testaceis, his articulo ultimo fusco; elytris crebre punctatis sed ad basin lævigatis, stria suturali anterius desinente; mesosterno tuberculo parum elevato.

Long. $\frac{1}{2}$–$\frac{7}{8}$ lin.

Hab. Mexico, Toxpam (*Sallé*); Guatemala, San Gerónimo, Cahabon, San Joaquin, San Juan, Coatepeque 1300 feet, Pantaleon 1700 feet, Lanquin, Guatemala city, Paso Antonio (*Champion*); Panama, Volcan de Chiriqui, 2500 to 4000 feet (*Champion*).

The individuals of this species are the smallest of the genus. The palpi are short and stout; the yellow colour forming the lateral margin of the thorax is more or less prolonged inwards along the anterior and basal margins; and the pale margin of the wing-case forms a very definite stripe, quite narrow at the base, but becoming gradually a little broader towards the apex. The punctuation of the wing-cases is peculiar, is not arranged in series, and is quite wanting about the base. The hind tarsi are elongate and extremely slender. The mesosternum bears in the middle in front a slight tubercular projection; the prosternum is without carina. I am not aware that this minute insect has any very near ally. It varies a good deal in size and colour and in sculpture of the upper surface, in a somewhat similar manner to what occurs in its European ally *H. limbatus*; the most marked of the varieties has the colour of the wing-cases greatly diluted and their punctuation diminished, and the tubercular elevation on the mesosternum almost absent. The numerous specimens found by Mr. Champion at Cahabon are all referable to this pallid variety; but intermediate individuals connecting the variety with the larger and darker specimens are not wanting.

METACYMUS.

Generis *Anacænæ* affinis. Caput latum, ante oculos dilatatum; labrum fere occultum. Antennæ perbreves, 7-articulatæ.

The unique example of the minute and obscure Palpicorn on which I base this genus is of very convex form, and, being somewhat compressed laterally, approaches a little in its form to *Volvulus*. The head is very broad and short; and the clypeus is scarcely emarginate in front, and the labrum almost entirely concealed; on each side the clypeus

extends in front of the eyes, so that these are not all prominent; and it extends backwards, without, however, completely dividing the eyes. The antennæ appear to have only seven joints, the first extending just beyond the margin of the clypeus, the second being rather large, while the third is quite minute, and the fourth is dilated and very closely applied to the base of the elongate, slender, loosely articulated club, which is composed of three joints. The maxillary palpi are short, with the apical joint a good deal longer than the penultimate; the mentum is transverse, flat, rounded in front. The mesosternum is elevated in front of the middle coxæ, so as to form a triangular margined prominence, connected behind with a very slender process of the mesosternum; the middle and hind coxæ, as also the ventral segments, are very finely pubescent; and the tarsi are quite feeble, with the basal joint very short. The epipleuræ beneath are very largely developed at the shoulder, being, however, completely folded in, so that a sharp edge is presented along the margin of the wing-case.

1. **Metacymus parvulus.**

Ovalis, valde convexus, lateraliter subcompressus, fusco-testaceus, limbo dilutiore, nitidus; antennarum basi palpisque testaceis, pedibus rufis; prothorace valde transverso, fere impunctato; elytris irregulariter punctatis, stria suturali anterius desinente, ad latera in medio seriebus duabus valde abbreviatis punctorum majorum.

Long. 1, lat. $\frac{5}{8}$ lin.

Hab. Panama, Volcan de Chiriqui, 2500 to 4000 feet (*Champion*).

Head extremely short and broad, very sparingly punctate. Thorax extremely short, the angles extremely rounded, the sides much narrowed towards the front. Elytra finely punctate near the suture, more coarsely towards the sides, and there furnished with two very short series of larger punctures.

The single individual found by Mr. Champion is in very fragile condition; the resemblance in colour and sculpture to the species of *Anacæna* is considerable.

PHILYDRUS.

Philydrus, Solier, Ann. Soc. Ent. Fr. 1834, p. 315.

Much difference of opinion has prevailed as to what variety of forms should be associated under this name; but the genus here is accepted under deduction of *Helochares*, *Cymbiodyta*, and *Hydrocombus*, which are all included among *Philydrus* in the Munich Catalogue of Coleoptera. Even when thus limited the genus will probably prove to be very widely distributed, but more specially characteristic of the temperate regions of the world. The species show everywhere such a great resemblance in their external appearance that it is impossible to determine them without reference to the structural characters. I give therefore the following indications necessary for the comprehension of the Central-American species:—

Terminal joint of maxillary palpi about equal in length to the preceding joint.
(Subgen. *Enochrus*, Thoms.) *P. discedens* and *P. mexicanus.*
Terminal joint of maxillary palpi shorter than the preceding joint.
Mesosternal lamina large, with sharply marked free angle. *P. nigellus*, *P. æqualis*, *P. debilis.*
Mesosternal lamina small, without angle. *P. obscurus*, *P. ochraceus.*

1. **Philydrus discedens.**

Ovalis, convexus, nitidus, nigricans, prothorace elytrisque ferrugineis; antennis basi, palpis, tibiis tarsisque testaceis; capite prothoraceque crebre fortiter, elytris magis sparsim et subtiliter punctatis, his seriebus tribus punctorum sat distinctis.
Long. $2\frac{1}{4}$, lat. $1\frac{1}{4}$ lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*).

Maxillary palpi short and stout, quite yellow. Head entirely black, closely and very distinctly punctate. Thorax and elytra entirely yellowish red, the former punctured like the head, the latter more sparingly and finely punctate, and also with rather indistinct almost equidistant series of punctures, but without any rudiments of series of larger punctures at the apex and sides.

This species is allied in structure to the European *P. melanocephalus*, Bedel (*Enochrus bicolor*, Thoms.), its short maxillary palpi being formed as in the insect just named; but the colour of the legs and the punctuation of the wing-cases are very different in the two species; and the mesosternal lamina presents also strong differences, it being much larger and more quadrangular in form in the Mexican insect.

I have seen but three individuals, in very bad preservation.

2. **Philydrus mexicanus.** (Tab. II. fig. 11.)

Oblongo-ovalis, nitidus, nigricans, limbo, antennarum basi, palpis tarsisque sordide testaceis, palpis articulo secundo infuscato; capite thoraceque crebre sat fortiter punctatis; elytris magis sparsim et magis subtiliter punctatis, et cum seriebus tribus punctorum sat distinctis.
Long. $2\frac{1}{2}$, lat. $1\frac{1}{3}$ lin.

Hab. Mexico, Oaxaca, Jalapa (*Höge*), Puebla (*Sallé*).

Maxillary palpi rather short for this genus, the second joint largely brown, and the terminal joint brown towards the apex. The punctuation on the head and thorax is quite distinct and regular, rather close; on the wing-cases the punctuation is considerably finer and more scanty, and thus allows the distant series of larger punctures to be more than usually conspicuous; there is no trace of striation at the sides or apex. The prosternum is finely carinate along the middle; and the small angle this carina forms in front is very acute, although but very little dependent. The mesosternal lamina is very large, and its free angle is a little prominent.

Although having quite the appearance of an ordinary *Philydrus*, this species is, so far

as the structure of the maxillary palpi goes, an *Enochrus*, the terminal joint being about equal in length to the penultimate joint. The few specimens before me are in a fragile and decayed condition, and will not bear a prolonged examination.

3. **Philydrus nigellus.**

Ovalis, nitidus, fusculus, limbo dilutiore, antennarum basi, palpis, tibiis tarsisque testaceis; palpis maxillaribus gracilibus sat elongatis, articuli ultimi dimidio apicali infuscato; capite thoraceque sat crebre, elytris magis sparsim punctatis, his seriebus tribus punctorum parum distinctis.
Long. 2, lat. 1 lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*), Oaxaca (*Höge*).

Maxillary palpi rather elongate and slender. Clypeus with a more or less distinct pale mark on either side. Sides of the prothorax broadly pale, the dark colour of the disk shading gradually into the pallid colour of the side. Elytra sparingly punctate, the three longitudinal series of punctures not very distinct. The prosternum is carinate along the middle, and in front the carina is very elevated (or rather dependent). The mesosternal lamina is very large.

Although very similar in colour, form, and sculpture to *P. mexicanus*, the present species is nevertheless very distinct; for, besides the difference in the structure of the palpi (*P. nigellus* having these organs of the normal *Philydrus* type, with the penultimate joint decidedly longer than the terminal joint), its individuals are considerably smaller, with more slender and elongate palpi, and with the carina or anterior compression of the prosternum more strongly marked. The individuals before me are only four in number, and are in a fragile condition.

4. **Philydrus æqualis.**

Breviter ovalis, sat latus, convexus, nitidissimus, sublævigatus, nigricans; supra fusco-testaceus, clypeo ex parte majore testaceo, antennarum basi palpisque testaceis; pedibus rufis.
Long. 2, lat. $1\frac{1}{8}$ lin.

Hab. Mexico, Guanajuato, Cordova (*Sallé*), Oaxaca, Jalapa (*Höge*); Guatemala, Guatemala city, San Gerónimo, Paso Antonio 400 feet, Coatepeque 1300 feet, Pantaleon 1700 feet, Chiacam, San Joaquin, Rio Naranjo (*Champion*); Nicaragua, Chontales (*Janson*).

This is a rather small, comparatively short and convex insect, with very polished upper surface and diminished punctuation. The head is more distinctly punctate than the rest of the upper surface; the clypeus is largely yellow, more or less infuscate in the middle; the suture separating it from the front is remarkably deep and distinct. Thorax only very finely and sparingly punctate. Elytra almost impunctate; but the discoidal series of punctures, though very fine, are easily detected, and the sutural stria is very deep, and is wanting only on approximately the basal one sixth of the length.

Tibiæ red, with the tarsi more dilute. Prosternum feebly cristate; mesosternal lamina very large, its free angle almost rectangular.

The above description applies specially to individuals found at Guatemala city; but the numerous specimens before me from various localities show considerable variation in colour, form, size, and in the punctuation of the upper surface, in the development of the prosternal crest, and even a little in the extension forwards of the mesosternal lamina. The smallest individual is scarcely $1\frac{3}{8}$ lin. in length. The colour is sometimes pale ochreous, with the thorax entirely flavescent, and the vertex definitely black; sometimes it is nearly unicolorous and ferruginous, and the punctuation is less obsolete, though always extremely fine; the carina on the prosternum is sometimes quite feeble, while in other cases it is very largely developed. The mesosternal lamina is always very large, and in some cases is so elongate that it runs forward as far as the anterior coxæ when the insect is in its moderately contracted condition. If there be more than one species amongst these numerous variations, the species must be numerous; and I quite fail to limit them by any test capable of satisfactory definition.

5. **Philydrus debilis.**

Ovalis, parum latus et convexus, nitidissimus, sublævigatus, nigricans; supra fusco-testaceus, clypeo utrinque testaceo-maculato; antennarum basi, palpis pedibusque testaceis.

Long. $1\frac{3}{8}$, lat. $\frac{3}{4}$ lin.

Hab. Guatemala, Paso Antonio 400 feet (*Champion*).

The punctuation of the upper surface is very fine and scanty, and the serial punctures on the wing-cases can scarcely be detected; the sutural stria is fine, and becomes so obsolete in front that it may be said to extend only about halfway to the base; the prosternum is without carina, and forms in the middle only a small obscure angle. The mesosternal lamina is very large.

Although I have before me only two individuals of this small and obscure insect, I can entertain no doubt they represent a species distinct from *P. æqualis*; they are only of the size of the smallest individuals of that species, and have the prosternum entirely without carina, and the sutural stria on the wing-cases much less developed.

6. **Philydrus obscurus.**

Ovalis, sat convexus, nitidus, fuscus, limbo clypeoque utrinque pallidioribus; antennarum basi, palpis pedibusque testaceis; superne crebre et æqualiter punctatus.

Long. 2, lat. $1\frac{1}{4}$ lin.

Hab. Mexico, Oaxaca (*Höge*).

This species bears a great resemblance to *P. nigellus*, from which, however, it is distinguished by an important structural character, viz. that the mesosternum has only a slight longitudinal elevation along the middle; the prosternum is quite destitute of

carination. The mesosternal elevation does not form any angle, but displays only a gentle curve.

The two individuals before me, agreeing in these structural characters, are discrepant in size, the smaller variety being only $1\frac{3}{4}$ lin. long, and being rather paler in colour and a little more finely punctate.

7. Philydrus ochraceus.

Philhydrus ochraceus, Melsh. Proc. Ac. Phil. ii. p. 101[1]; Lec. op. cit. 1855, p. 371[2]; Horn, Trans. Am. Phil. Soc. 1873, p. 129[3].

Hab. North America[1], from Massachusetts to Florida[2 3].—Mexico; Guatemala, Dueñas, Paso Antonio (*Champion*).

The specimens from Guatemala appear to form a variety in which the punctuation of the upper surface is diminished, and there is an indistinct stripe of dark colour along the suture. As *P. ochraceus* is variable in respect of its sculpture, and as the Guatemalan individuals quite agree with it in structure, they cannot be looked on as a distinct species. The resemblance to those varieties of *P. æqualis* that have a slight punctuation on the wing-cases is very great; but the slight development of the mesosternal carina in *P. ochraceus* is quite sufficient to validate its specific distinction. The species appears to be variable even in Guatemala; for the two specimens from Paso Antonio have the wing-cases almost without punctuation, and wanting the obscure stripe of dark colour existing in the more numerous specimens from Dueñas.

HYDROCOMBUS.

Genus *Philhydri* affine, sed tarsi posteriores quadriarticulati, mesosternum ante coxas lamina transversa armatum, pronotum basi immarginatum palporumque maxillorum articulus pseudo-basalis aliter arcuatus.

Palpi maxillares quadriarticulati, articulo basali brevissimo fere nullo, secundo margine anteriore haud convexo sed subconcavo, tertio quam secundus breviore sed quam articulus quartus longiore. Palpi labiales perbreves. Mesosternum lamina transversa paulo ante coxas intermedias plus minusve elevata armatum. Tarsi anteriores quinquearticulati, intermedii et posteriores quadriarticulati, hi articulo basali elongato, quam secundus duplo longiore; ungues simplices, tenues, leviter arcuati. Elytra punctata, striaque suturali impressa.

This genus has some species in North America; but they have not yet been distinguished from *Philydrus*, though the genus is a remarkably distinct one and is well defined by its structural characters; all the species, however, have very much the external appearance or facies of *Philydrus*. *Hydrocombus* is quite distinct from the genus just mentioned, as well as from *Helochares*, by the truly four-jointed middle and hinder tarsi: this character is not illusory; for even when the tarsi are mounted in Canada balsam no trace of a division of the basal joint can be perceived. *Hydrocombus* has this peculiar character in common with the European genus *Cymbiodyta*, Bedel; and the two genera also agree in that they have the pseudo-basal joint of the maxillary

palpi very slightly bent in such a manner that when extended the curve of the part is concave in front or inwardly, whereas in *Philydrus* the curve of the joint is in the opposite direction. *Hydrocombus*, however, is distinct from *Cymbiodyta*; for it has a transverse elevation on the mesosternum, in place of the longitudinal one existing in the latter genus.

The genus, so far as I know at present, is restricted to North and Central America.

1. Hydrocombus brevicollis.

Latus, breviter ovalis, nitidus, piceus, clypeo utrinque et prothoracis elytrorumque lateribus dilutioribus; antennarum basi, palpis pedibusque testaceis; sat crebre punctatus, elytris seriebus decem punctorum magnorum, quarum 1^{a}–3^{m} anterius plus minusve abbreviatis.

Long. $2\frac{1}{8}$, lat. $1\frac{3}{8}$ lin.

Hab. Mexico, Oaxaca (*Höge*).

This species is remarkable by the very coarse punctures of which the series on the wing-cases are composed. The palpi are entirely yellow and rather elongate; the head short and broad. The striæ on the elytra are very deep and bear remarkably coarse punctures; the outer seven of these striæ extend from the apex to the base, but the three internal are abbreviate in front. There is also a sutural stria, which is very deep behind, but becomes fainter and disappears in front. The head and thorax are rather closely punctate; and the portions of the elytra where there are no striæ are rather more finely punctured than the head and thorax. The prosternum is obscurely carinate along the middle, and forms a small prominent angle in front. The mesosternal lamina is rather strongly elevated, but is narrow and its lower edge is a rounded angle.

2. Hydrocombus fraterculus.

Oblongo-ovalis, nitidus, piceus, prothoracis elytrorumque lateribus dilutioribus; antennarum basi, palpis pedibusque testaceis; crebre punctatus, elytris seriebus decem punctorum, quarum internis anterius plus minusve abbreviatis.

Long. $2\frac{5}{8}$, lat. $1\frac{1}{2}$ lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*).

This species has the ordinary appearance of a *Philydrus*, but appears, so far as the two badly preserved individuals before me enable me to judge, to be closely allied in structure to *H. brevicollis*. The upper surface is rather closely and distinctly punctate, and there are some series of punctures quite distinct and rather coarse but not placed in striæ or depressions; the outer two, however, are deeper than the others, and almost become punctate striæ. The series nearer than these to the suture become finer as the suture is approached; and all cease before attaining the base; the more internal series are shorter as well as finer than the others. On the interstices between these series there are some punctures irregularly placed; and these are considerably larger than the other more numerous punctures of the surface.

3. **Hydrocombus politus.** (Tab. II. fig. 10.)

Ovalis, pernitidus, niger, prothoracis elytrorumque lateribus pallidis; antennarum basi, palpis pedibusque rufo-testaceis; sat crebre punctatus, elytris ad summum apicem breviter striatis, striis duabus externis anterius elongatis, dorso seriebus duabus punctorum remotorum.

Long. 2, lat. $1\frac{1}{4}$ lin.

Hab. GUATEMALA, San Gerónimo (*Champion*).

The palpi are rather short, entirely yellow. The head and thorax are very shining, but are moderately closely punctate. The elytra are rather more sparingly punctate; they have externally two series of punctures which do not reach to the base; and at the extreme apex are the very short rudiments of seven or eight other series; there are also on the disk two rather irregular series of distant large punctures. The middle of the prosternum is obscurely carinate, and is angulate in front. The mesosternal transverse process is very prominent.

SINDOLUS.

Palpi maxillares perelongati, porrecti, articulo pseudo-basali interne concavo; palpi labiales perbreves, crassiusculi, articulo penultimo quam ultimus crassiore; mentum anterius leviter impressum, margine anteriore rotundato; mesosternum lamina longitudinali armatum. Tarsi omnes quinquearticulati. Elytra absque stria suturali.

I have separated under this name two species closely allied both to *Philydrus* and *Helochares*, and having quite the appearance of short convex *Helochares*, but distinguished from that genus by the largely developed lamina of the mesosternum, while from *Philydrus* the genus is separated by the elongate maxillary palpi, whose pseudo-basal joint is curved in the opposite direction, and by the absence of a sutural stria on the wing-case. The submental area is large, as in *Helochares*, but is not quite so definite; that is, it is not so highly polished, and the few punctures on it are fine and bear very fine hairs.

I am not acquainted with any species other than the two here assigned to the genus.

1. **Sindolus optatus.** (Tab. II. fig. 12.)

Ovalis, convexus, ferrugineus, pernitidus; antennarum basi, palpis tarsisque testaceis, palpis elongatis; subtiliter parum crebre punctatus.

Long. $2\frac{1}{8}$, lat. $1\frac{1}{8}$ lin.

Hab. GUATEMALA, Paso Antonio (*Champion*).

Palpi pale yellow, slender and very elongate. The whole of the upper surface very shining. Head sparingly but distinctly punctured; clypeal suture obsolete in the middle. Thorax finely and sparingly punctate. Elytra very finely and sparingly punctate near the suture, more closely and distinctly at the sides and apex. Mentum transversely rugose; the submental polished area large and definite; prosternum very finely and indistinctly carinate, the carina hardly at all more elevated on the middle of the front margin. Mesosternal lamina very large, its anterior angle rather produced and hamate, its lower edge finely setigerous.

2. **Sindolus mundus.**

Ovalis, sat convexus, livide ferrugineus, pernitidus; antennarum basi, palpis tarsisque testaceis; palpis elongatis; capite thoraceque parum crebre punctatis; elytris ad latera seriebus duabus punctorum, et ad apicem seriebus aliis brevissimis, præterea fere impunctatis.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{4}$ lin.

Hab. MEXICO, Oaxaca (*Höge*).

This species is very similar to *S. optatus*; but the elytra are almost impunctate, except that they have two or three somewhat imperfect series of punctures near the lateral margins and the rudiments of six or seven other series at the apex. Only a single individual has been brought before me: it has a series of punctures on each of the wing-cases near the suture; but this may possibly be accidental. The mesosternal lamina is very large; and the structural characters seem to be extremely similar to those of *Sindolus optatus*, except that the clypeal suture is very distinct, and that a longitudinal suture in the middle extends backwards from it.

CHASMOGENUS.

Genus *Philydri* et *Helocharidis* affine, sed mento aliter formato, anterius in medio regulariter impresso, margine anteriore in medio late semicirculariter emarginato. Palpi maxillares elongati, graciles, ut in genere *Helocharide* formati; palpi labiales perbreves, articulo ultimo leviter sed distincte incrassato. Oculi prominuli. Mesosternum subarmatum. Tarsi omnes evidenter quinquearticulati, tenuissimi.

I propose this genus for a curious little insect of very fragile structure, and in appearance as well as by its systematic characters very similar to *Helochares* and *Philydrus*, but distinguished by a peculiarity of the mentum, inasmuch as the peculiar bent-in or hollowed condition of this part seen in *Helochares* has here assumed the form of a definite impression, and in front is terminated by a broad curved emargination. The maxillary palpi are very elongate and slender, formed as in the genus *Helochares*; the labial palpi are very short, and the terminal joint slightly but undoubtedly dilated. The mesosternum does not bear any distinct lamina, but is slightly prominent in a longitudinal manner along the middle; and the front of this prominence forms an edge, so that there really exists the rudiment of a lamina. The legs are very slender; and the tarsi are evidently five-jointed, but extremely slender. There is a sutural stria on the wing-cases. The glabrous submental area is limited to a mere slip at the front margin just behind the mentum.

1. **Chasmogenus fragilis.** (Tab. II. fig. 13.)

Oblongus, subdepressus, nitidissimus, piceus, prothoracis lateribus late pallidioribus; elytris fere nigris, ad latera dilutioribus; antennarum basi, palpis tarsisque testaceis, pedibus rufis; capite thoraceque sparsim subtilius punctatis; elytris fere lævigatis, stria suturali impressa.

Long. $1\frac{7}{8}$, lat. $\frac{7}{8}$ lin.

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA, Caldera, 1200 feet (*Champion*).

The fragile, depressed, and oblong form and the very polished upper surface render

this insect very distinct amongst its known allies. There is an irregular series of punctures on the middle of each wing-case, and another near the lateral margin. The prosternum is not carinate along the middle.

The unique individual from Caldera is rather smaller, and the punctuation of the upper surface is not so obliterated; but I cannot venture to treat it as a distinct species.

HELOCHARES.

Helochares, Mulsant, Hist. Nat. Col. Fr., Palp. (err.), 1844.
Helophilus, Muls. op. cit. p. 132.
Philhydrus (pt.), Mun. Cat. ii. p. 480.

This genus has not been accepted by many entomologists as distinct from *Philydrus*; nevertheless there seem to be very good grounds for its adoption. Not only is the mesosternum destitute of any definite lamina or carina, but the pseudo-basal joint of the maxillary palpus is curved in the opposite direction to what it is in *Philydrus*, the labial palpi are shorter and thicker and their joints of less cylindrical form, there is always a definite polished space behind the mentum, and the front of the mentum is more deeply and broadly hollowed or bent inwards towards the labrum. In some species, possibly in all, of *Helochares* the mentum bears a small notch at the front margin in the middle; but the structure of the neighbouring parts renders this character very difficult of verification.

Helochares has numerous species in various parts of the world, including even Australia; but these insects are probably less tolerant of cold than are the *Philydri*, and inhabit, as a rule, warmer regions.

1. Helochares oculatus.

Ovalis, subdepressus, fuscus; antennarum basi, palpis tarsisque testaceis; nitidus, fere lævigatus; palpis elongatis; oculis magnis.
Long. 3, lat. $1\frac{1}{2}$ lin.

Hab. Guatemala, Paso Antonio (*Champion*).

Head with subobsolete punctuation; the labrum very largely exposed; the eyes large. Thorax with obsolete punctuation; but this is a little more visible, though very fine, on the disk. Elytra almost entirely destitute of punctuation, with a very indistinct longitudinal series of excessively fine punctures along the middle. Mentum covered with coarse curved rugæ; the submental area very definitely (indeed abruptly) limited behind, not shining, although destitute of pubescence, but covered with rugæ less coarse than those of the mentum. Prosternum without carina or angle in the middle. Mesosternum distinctly gibbous in front of the coxæ. Posterior tarsi elongate, their second joint very long.

2. **Helochares sallæi.**

Elongato-ovalis, subdepressus, nitidus, piceus, limbo dilutiore; antennarum basi, palpis tarsisque testaceis; crebre, fere fortiter punctatus; palpis elongatis, oculis magnis.
Long. $3\frac{1}{2}$, lat. 2 lin.

Hab. Mexico, Cordova (*Sallé*).

Head distinctly punctate; clypeus with an irregular transverse series of larger punctures on either side near the front; clypeal suture marked by larger punctures, and with a few irregularly placed larger punctures behind it on either side. Labrum very largely exposed. Thorax very distinctly punctate, and with a very distinct transverse series of punctures on either side near the front, and with a much shorter and more irregular series on each side behind the middle. Elytra distinctly punctate, the punctures towards the extremity obsolete, with a distinct series of punctures along the middle, and two other less distinct series external to this. Mentum finely grooved on either side, but along the middle with a large smooth space, becoming broader in front; submental area very definitely limited, somewhat finely grooved. Prosternum not at all carinate; mesosternum obscurely prominent in the middle near the coxæ.

Although I have seen but a single individual of this species, I think it distinct from some other very similar undescribed South-American insects by the greater development of the punctuation of the upper surface.

3. **Helochares championi.** (Tab. II. fig. 14.)

Breviter ovalis, parum convexus, nitidus, livide testaceus; antennarum basi, palpis tarsisque testaceis; capite thoraceque crebre subtiliter, elytris adhuc subtilius punctatis; palpis mediocriter elongatis; oculis minoribus.
Long. $2\frac{3}{4}$, lat. $1\frac{3}{4}$ lin.

Hab. Guatemala, Guatemala city 5000 feet, Dueñas, San Gerónimo (*Champion*); Nicaragua, Chontales (*Belt*).

Head rather small, distinctly punctate. Thorax finely but distinctly punctate; elytra still more finely but nevertheless distinctly punctate, the serial punctures very indistinct. Mentum very coarsely and deeply rugose punctate; submental area rather short, bearing a few coarse punctures. Prosternum slightly compressed along the middle, and forming an angle in front. Mesosternum very slightly swollen in front of the coxæ.

This species is readily distinguished from the two just described by the shorter legs and palpi, smaller eyes, and numerous other subordinate characters. In the more translucent specimens the wing-cases have a peculiar appearance of bearing a pattern consisting of fine longitudinal pale lines separated by broader streaks of dark colour; and in certain individuals this dark colour is further broken up by numerous transverse lines of the pale colour.

A specimen of the latter variety from Chontales is figured.

4. **Helochares seriatus.**

Breviter ovalis, parum convexus, pernitidus, lividus; antennarum basi, palpis pedibusque testaceis; capite thoraceque subtiliter punctatis; elytris nullomodo striatis, seriebus decem regularibus punctorum impressorum conspicuis.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{4}$ lin.

Hab. GUATEMALA, Guatemala city 5000 feet, Pantaleon 1700 feet, Coatepeque 1300 feet, Rio Naranjo 480 feet, San Gerónimo (*Champion*).

This species is remarkable from the ten very regular series of punctures on each wing-case, these series not being placed in depressed striæ as is the case in other punctate-striate species of the genus. The palpi are moderately long, the eyes small; the mentum is very closely and coarsely rugose-punctate, the submental area not limited behind by a definite line, but glabrous and shining and with coarse punctures. The prosternum is very obscurely carinate along the middle, and the mesosternum longitudinally prominent along the middle.

5. **Helochares regularis.**

Breviter ovalis, parum convexus, pernitidus, lividus; antennarum basi, palpis tarsisque testaceis; capite crebrius sat fortiter punctato; thorace minus crebre subtiliter punctato; elytris substriatis, striis fortiter punctatis.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{4}$ lin.

Hab. MEXICO.

Closely allied to *H. seriatus* in all points except the sculpture of the upper surface, which is here much coarser, the punctate striæ of the elytra being especially much more developed.

The only individual I have seen is from an old French collection; but I have no doubt the locality is correct.

6. **Helochares bipunctatus.**

Ovalis, subdepressus, nitidus, sordide ferrugineus; antennarum basi, palpis pedibusque testaceis; capite thoraceque crebrius sat fortiter punctatis, hoc basi utrinque puncto majore conspicuo impresso; elytris profunde striatis, striis latis etiam ad apicem impressis, fortiter punctatis.

Long. $2\frac{1}{2}$, lat. $1\frac{3}{8}$ lin.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Torola, 1000 feet (*Champion*).

Distinguished from *H. seriatus* and *H. regularis* by the deep broad striæ on the wing-cases, each stria being filled with punctures separated from one another by extremely small intervals; this same character separates the species from the North-American *H. maculicollis*, Melsh. The larger puncture near the base of the thorax on each side exists also in *H. maculicollis* and in *H. regularis*, but in the latter species is less conspicuous than it is in *H. bipunctatus*.

Only a single individual from each of the two localities.

HELOPELTIS.

Helopeltis, Horn, Trans. Am. Phil. Soc. xiii. p. 137 (1873).

This genus was established by Dr. Horn for a peculiar species having the labrum concealed under the clypeus, and this latter projecting laterally in front of the eyes to a greater extent than is usual in *Helochares*. But to the characters pointed out by Dr. Horn another, of much greater importance, must be added, viz. that the anterior coxal cavities are closed behind by the junction of the epimera with the prosternal process. This character isolates the insect from all the other Hydrobiini, although in other respects it is approached by various species of *Helochares*.

1. **Helopeltis larvalis.** (Tab. II. fig. 15.)

Helopeltis larvalis, Horn, loc. cit. p. 137[1].

Hab. North America, Louisiana[1].—Mexico, Sonora[1]; Guatemala, Paso Antonio 400 feet (*Champion*).—Cuba[1].

Only three individuals of this remarkable insect have been sent by Mr. Champion. It is highly probable that it possesses a peculiar mode of life.

LACCOBIUS.

Laccobius, Er. Käf. Mark Brandenb. p. 202 (1837).

This is a genus, of about twenty species, specially characteristic of the Mediterranean Region, but with two species in the Nearctic Region: of these two the one that is found in California extends its range to Mexico.

1. **Laccobius ellipticus.**

Laccobius ellipticus, Lec. Proc. Ac. Phil. p. 363[1] (1855).

Hab. North America, California[1].—Mexico, Guanajuato (*Dugès, coll. Sallé*), Puebla (*Sallé*).

DERALLUS.

Corpus lateraliter compressum, subtus planum, superne longitudinaliter convexissimum. Tibiæ anteriores latæ, ad apicem longius oblique truncatæ, calcaribus distantibus, uno, parvo, ad angulum internum vel inferiorem sito, altero, majore, ultra medium marginis sito. Oculi magni, parum prominuli. Abdomen ex segmentis ventralibus quinque compositum. Pedes intermedii et posteriores pro rematione valde modificati; femoribus brevibus et latis; tarsis compressis, apicem versus attenuatis; unguiculi omnes parvi.

The form of the insect for which I have established this genus is most remarkable, and is only approximated by the Old-world genus *Volvulus*, where, however, the form is much more elongate, and comparatively less elevated and compressed. *Derallus* differs, too, from *Volvulus* in that it has five external abdominal segments, whereas in *Volvulus* the number is reduced to four; in *Volvulus*, too, the antennæ appear to be

8-jointed, whereas in *Derallus* there are but seven joints. In other respects, however, the two genera are closely allied. The genus *Volvulus* has latterly been merged in *Berosus*; but such a proceeding is a very erroneous one, the two genera being far from closely allied. In regard to the abdominal structure the three genera under consideration form an interesting series. In *Berosus* there are five external segments, and a sixth, but still horny, retracted segment. In *Derallus* there are likewise five external segments, but the sixth retracted horny segment has disappeared; while in *Volvulus* there are but four external segments, and a fifth retracted horny segment; this fifth segment, although retracted, is notched in a similar manner to what it is in *Derallus* and *Berosus*, where it remains external. The whole border or hind margin of the fourth segment in *Volvulus* is set with short horny teeth (which may possibly be a portion of a stridulating-apparatus). In *Berosus* the hind margin of the fifth segment is densely set with similar though smaller teeth; but in *Derallus* they appear to be absent. Although these insects have been latterly confounded with *Berosus*, it is clear they are abundantly distinct. Besides the species here described, I am acquainted with only two others that can be assigned to the genus *Derallus*: both are undescribed; and one is from Colombia, the other from Brazil. I have no doubt, however, the very rare North-American *Berosus altus*, Lec., is a *Derallus*; indeed Dr. Horn, in describing and discussing this insect (Trans. Am. Phil. Soc. xiii. p. 124), has already pointed out that it should probably be generically separated from *Berosus*.

1. **Derallus angustus.** (Tab. II. fig. 16.)

Lateraliter valde compressus, longitudinaliter convexissimus, superne viridi-æneus nitidus, subtus piceus, pedibus rufis; antennarum basi, palpis pedibusque anterioribus testaceis; elytris sparsim sat fortiter sed parum profunde punctatis, versus latera substriatis, striis conspicue punctatis.

Long. $1\frac{1}{4}$, lat. $\frac{1}{2}$, alt. $\frac{3}{4}$ lin.

Hab. GUATEMALA, Paso Antonio 400 feet (*Champion*).

Head moderately closely and coarsely punctate. Thorax shining and almost impunctate, except for a few punctures near the sides. Elytra near the outer margin finely striate, the striæ coarsely punctured, and the interstices somewhat sparingly and coarsely punctate; after the fifth stria those nearer to the suture become very indistinct, so that the sutural region appears for a broad space impunctate, except quite at the apex.

The laterally compressed, excessively convex form of this insect is extremely peculiar; the under surface is flat, all the convexity being above.

BEROSUS.

Berosus, Leach, Zool. Misc. iii. p. 92 (1817).
Enoplurus, Hope.

This genus, as I have remarked in speaking of *Derallus*, has latterly been mixed with

Volvulus, but very improperly. *Berosus* has the front tibiæ slender and linear, and deeply grooved externally for the accommodation of the tarsi when retracted, a character of itself amply sufficient, even if we leave out of consideration the other numerous points of distinction, to distinguish it from its heterogeneous associates. As thus limited, *Berosus* remains an extensive genus, with fully fifty described and a large number of undescribed species, distributed over most of the earth's surface, but apparently more attached to the warmer regions. The species form a most difficult study, owing to their great resemblance and the absence of conspicuous differences in form and colour and sculpture. North America has sixteen species; and these have been well characterized by Leconte, and more recently by Horn (Trans. Am. Phil. Soc. xiii. p. 118 *et seqq.*). The latter author has used some valuable characters for forming sections in the genus, one of which, however, should be abandoned.

The Central-American species here enumerated form three groups, viz.:—

1. Elytra spinose at extremity. *B. truncatipennis*, *B. griseus*, and *B. salvini*.
2. Elytra unarmed at apex; basal ventral segment without carina, except between the coxæ. *B. puncticollis*, *B. infuscatus*, *B. falcatus*, *B. flavicornis*, *B. mexicanus*, and *B. metalliceps*.
3. Elytra unarmed at apex; basal ventral segment with a well-marked carina extending along nearly all the length of the middle. *B. gracilipes* and *B. mœrens*.

1. **Berosus salvini.** (Tab. III. fig. 1.)

Major, supra testaceus, in elytris fusco-maculatus, capite æneo; thorace dense fortiterque punctato, medio metallico-bivittato, utrinque fusco maculato; elytris æqualiter sat profunde striatis, interstitiis crebre fortiterque punctatis, apicibus spinosis anguloque suturali evidenter acuminato; corpore subtus nigro, prothoracis lateribus late testaceis; antennarum basi, palpis pedibusque testaceis, femoribus basi nigris, tibiis intermediis et posterioribus versus apicem cum tarsis nigricantibus.

Long. $3\frac{1}{2}$, lat. $1\frac{1}{2}$–$1\frac{7}{8}$ lin.

Hab. MEXICO, Oaxaca (*Höge*), Guanajuato (*Dugès*, *coll. Sallé*), Puebla, Toluca (*Sallé*); GUATEMALA, Guatemala city 5000 feet (*Champion* and *Salvin*), San Joaquin (*Champion*).

This is a remarkable species, the size being larger than usual, and the upper surface nearly dull, with coarse close sculpture. The spots on the elytra are very large, and sometimes suffused so as to make the surface appear nearly entirely dark. The tooth at the apex of each wing-case is slender and moderately long, and the suture, though not spinose, is distinctly prolonged and acute. The male has the basal joints of the front tarsi much dilated; the fifth ventral segment has in the middle a rather broad emargination, so that it forms a prominent tooth on each side; and the middle part of the base of the emargination is a little produced backwards, and in front of this the surface is strongly elevated and compressed so as to form a rather short but prominent carina; the fourth segment bears in the middle behind a small tooth. The female is

quite destitute of this carina. The basal ventral segment is not carinate, except that it is prominent between the coxæ.

This species is probably an ally of the Californian *B. punctatissimus*, Lec.

2. **Berosus truncatipennis.**

Berosus truncatipennis, Cast. Hist. Nat. ii. p. 56 [1].

Hab. Mexico, Oaxaca (*Höge*), Vera Cruz, Cordova (*Sallé*); Guatemala, Paso Antonio 400 feet (*Champion*).—Brazil [1], Santa Cruz (*van Volxem*).

3. **Berosus griseus.**

Angustulus, capite æneo, crebre fortiter punctato; prothorace valde transverso, fortiter punctato, fusco-testaceo, lateribus dilutioribus, dorso parum discrete fusco-bivittato; elytris sat profunde striatis, striis parum distincte punctatis, interstitiis fortiter crebreque punctatis, apicibus spinosis, fusco-testaceis, parum discrete nigro-maculatis; corpore subtus fusco-testaceo, capite abdomineque nigricantibus; pedibus, antennarum basi palpisque pallide testaceis, his apice summo nigro.

Long. 2, lat. vix 1 lin.

Hab. Guatemala, Paso Antonio (*Champion*).

Head broad, with large convex eyes; its upper surface of shining golden or brassy colour, closely punctate. Thorax very coarsely punctate; the two dark marks on the middle are but little distinct from the ground-colour, but, viewed in certain lights, appear metallic. The elytra are rather deeply striate, the sutural striæ not being very much finer than the outer ones; the punctuation of the interstices is coarse and rather close; at the apex of each is a short acute spine or tooth, only moderately distant from the suture; the maculation is but indistinct; a large black spot near the side about the middle, however, is conspicuous; and there is a humeral spot, also rather indistinct. The legs are clear pale yellow; the front tarsi extremely slender.

The male has the basal joints of the front tarsi scarcely dilated; the fifth ventral segment has on each side of the middle an emargination bounded externally by a tooth; the broad space separating these teeth is quite gently rounded. In the female the lateral teeth are not so widely separated, and the space between them is nearly truncate, there being, however, a very slight trace of a broad emargination in the middle. There is no carination of the basal segment in either sex.

I do not know any near ally for this insect. The mesosternal lamina is but little elevated, but is nevertheless, at its most prominent part, developed so as to form there a free projecting angle.

4. **Berosus puncticollis.**

Oblongo-ovalis, capite aureo-æneo, fortiter punctato, nitido; prothorace fortiter transverso, pallide testaceo, fortiter punctato, dorso late fusco-bivittato; elytris testaceis, vix fusco-maculatis, profunde striatis, striis punctatis, interstitiis uniseriatim punctatis; pedibus, antennis palpisque testaceis, his apice fusco.

Long. $1\frac{3}{4}$, lat. vix 1 lin.

Hab. Mexico, Oaxaca (*Höge*).

Head coarsely punctate, with a depression on the middle. Thorax very strongly transverse, with the sides straight, shining, but with the surface coarsely and deeply punctate; the two approximate discoidal vittæ rather indefinite. Elytra rather deeply striate; the striæ very distinctly punctured, the punctures being more separate from one another than usual; the interstices shining, each bearing an almost regular series of fine punctures. Legs unicolorous, clear yellow. Antennæ entirely yellow; palpi with the extremity rather largely infuscate.

A distinct species, with the apices of the elytra unarmed; the mesosternal lamina forming in front a short but quite distinct falcate projection; the anterior part of the under surface of the head very polished and shining, the mentum being entirely without punctures; the basal ventral segment has a fine, sharply elevated carina between the coxæ; but this does not extend backwards. The unique individual before me is a female, and possesses on the fifth ventral segment a transverse emargination, the base of which appears to me to form a very short rounded projection, without teeth.

5. **Berosus infuscatus.**

Berosus infuscatus, Lec. Proc. Ac. Phil. 1855, p. 365[1]; Horn, Trans. Am. Phil. Soc. xii. p. 123[2].

Hab. North America, Southern States from Florida to California [1 2].—Mexico, Oaxaca (*Höge*), Parada (*Sallé*).

The series of more than twenty individuals found by Höge shows very little variation independent of the sexual differences. The two teeth, alluded to by Dr. Horn, at the base of the emargination of the fifth ventral segment in the male are not easily detected, owing to their being nearly covered by a lobing or production of the base of the emargination; this lobe, moreover, is finely ciliate. I have not seen any North-American individual of the species; and as the allied species in this group are extremely similar to one another (although distinguished by valid characters), my determination of these Mexican individuals may possibly prove incorrect.

6. **Berosus falcatus.**

Flavo-griseus, capite aureo, prothorace medio vittis duabus parvulis fusco-æneis; elytris parum discrete fusco maculatis; antennis, palpis pedibusque testaceis; prothorace sat crebre punctato; lamina mesosternali anterius longius dependente, quasi in spinam tenuem producta; elytrorum apicibus muticis.

Mas prothorace elytrisque nitidis.

Fem. prothorace elytrisque opacis alutaceis.

Long. 3–3¼, lat. 1½ lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*), Toluca (*Sallé*).

This species is remarkable by the great sexual disparity in the sculpture of the thorax and elytra, and by the elongate mesosternal lamina, which in front is produced to form a slender elongate falcate process; the punctuation of the thorax is less regular than in the allied species, there being on the disk a denser, rougher sculpture,

the punctures, too, not being all of one size; the punctuation of the scutellum is much obliterated. The internal striæ of the wing-cases are quite fine, while the external are a good deal deeper; the interstices are quite sparingly and rather finely punctate. The legs are entirely yellow, even the front coxæ being clear yellow, and the middle and hind coxæ having a decidedly yellow appearance.

The male has the basal joints of the front tarsi greatly incrassate; the fifth ventral segment has a broad short emargination at the extremity; the middle part of the base of this emagination forms an extremely short broad projection, the hind margin of which is slightly emarginate. In the female the base of the emargination is bidentate.

The Californian *B. styliferus*, Horn, is evidently nearly allied to this remarkable species.

7. **Berosus flavicornis.**

Flavescens, capite læte metallescente, prothorace medio vittis duabus parvulis fusco-æneis; elytris maculis fuscis parvulis; pedibus, palpis antennisque testaceis, harum clava nullomodo infuscata; prothorace sat crebre æqualiter punctato; elytris striis externis quam internæ multo profundioribus, apicibus muticis.

Mas nitidus, prothorace tantum subtilissime alutaceo.

Fem. subopaca, prothorace elytrisque alutaceis.

Long. 3, lat. $1\frac{3}{8}$ lin.

Hab. Mexico, Oaxaca (*Sallé*).

Closely allied to *B. infuscatus*, but of more flavescent tinge, with the male elytra quite shining, the club of the antennæ as clear yellow as the base, the legs only slightly obscurer in colour at the base of the femora, the striæ of the elytra deeper and more coarsely punctate, and with the base of the notch of the fifth ventral segment of the male distinctly bidentate. The size of the individuals is perhaps rather smaller, and the prothorax is more transverse. From *B. falcatus* the species is readily distinguished by the ordinary form of the mesosternal lamina.

8. **Berosus mexicanus.**

Ovalis, angustulus, capite metallescente crebre punctato; prothorace testaceo, medio vittis latis vix divisis nigro-metallicis, subtiliter sat crebre punctato; elytris testaceis fusco-maculatis, sat profunde striatis, striis internis subtilioribus, interstitiis crebre haud subtiliter punctatis; scutello obsolete punctato; antennarum basi, palpis pedibusque testaceis, femoribus basi obscuriore.

Long. $2\frac{1}{8}$, lat. 1 lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*).

This species appears to be closely allied in its structure to *B. infuscatus*, but is very readily distinguished by the smaller size and the larger dark marks on the thorax. The male anterior tarsi have only a moderate dilatation of the basal joints; and in the female the surface is scarcely rendered dull by being extremely finely alutaceous. In each sex the transverse notch at the extremity of the fifth ventral segment has, in the middle of its base, two very distinct projecting teeth. The mesosternal lamina is large, and its front angle almost rectangular, showing scarcely any projection. The oblitera-

tion of the scutellar punctuation is remarkable, and is constant in the small series of individuals before me.

This species is labelled in Sallé's collection "*B. mexicanus*, E. Dugès;" and I have retained this manuscript name.

9. **Berosus metalliceps.**

Niger, capite purpureo-metallico; antennis, palpis, prothorace elytrisque pallide testaceis, fere albidis; capite fortiter haud dense punctato; thorace valde transverso, sparsim punctato; elytris striatis, striis crenato-punctatis.

Long. $2\frac{1}{2}$, lat. $1\frac{1}{4}$ lin.

Hab. MEXICO, Tres Marias islands (*Forrer*).

A very distinct species, that may be recognized at a glance by the immaculate thorax and elytra. The striæ on the elytra are deep, and the interstices are impunctate; but on the third there is an irregular and interrupted series of coarse punctures, and on the fifth still more isolated punctures exist. The scutellum is coarsely punctate. The mesosternal lamina is but little elevated, but shows in front a well-marked, more prominent angle. The two basal joints of the front tarsi of the male are a little dilated. The apical ventral segment bears a transverse emargination at the extremity, the base of which is slightly rounded but not at all bidentate.

Three individuals of this remarkable species (unfortunately in very bad preservation) have been sent by Forrer.

10. **Berosus gracilipes.**

Supra rufo-testaceus, elytris nigro maculatis, capite viridi-aureo, fronte media purpurascente, thorace in medio metallico-signato; subtus fusco-testaceus, antennarum basi, palpis pedibusque testaceis, his tibiis tarsisque plus minusve fuscescentibus; capite thoraceque crebrius punctatis; elytris striatis, striis fortiter punctatis.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{4}$ lin.

Hab. MEXICO, Oaxaca (*Höge*); GUATEMALA, San Géronimo (*Champion*).

Head closely and coarsely punctate; vertex finely carinate. Thorax closely, subrugosely punctate, the punctuation consisting very distinctly of coarser and much finer punctures mixed together; the sides nearly straight, very slightly converging behind; on the middle is a rather large metallic mark, enclosing in its middle a very narrow yellow space. The elytra are shining, and are coarsely sculptured; the striæ towards the sides are very deep and bear very coarse punctures; and the interstices are coarsely and irregularly punctured. The legs are elongate and very slender, the tibiæ and tarsi of the two hinder pairs being more or less infuscate; the under surface is either yellow or infuscate-yellow. The lamina of the mesosternum is large. The apices of the elytra are simply rounded. The male is distinguished from the female only by a slight dilatation of the basal joints of the front tarsi; in each sex there is a rather large emargination on the last ventral segment, the base of which bears a short bidentate tooth. The basal abdominal segment is strongly carinate in the middle.

This species is closely allied to the European *B. luridus*; but the individuals are rather larger, the sculpture is not so coarse, and the legs are longer and more slender. The depth of the ground-colour, the amount of maculation on the elytra, and the size of the metallic marks on the thorax are apparently rather variable.

11. **Berosus mœrens.**

Brevis, convexus, capite thoraceque metallescentibus, dense fortiter punctatis, hoc anterius et ad margines laterales testaceo; elytris fuscis, vix discrete maculatis, profunde subæqualiter striatis, striis dense punctatis, interstitiis fortiter, fere seriatim punctatis; antennarum basi, palpis pedibusque testaceis, tibiis tarsisque posterioribus et intermediis palporumque apice infuscatis.

Long. $1\frac{1}{2}$, lat. $\frac{3}{4}$ lin.

Hab. MEXICO, Oaxaca (*Höge*); GUATEMALA, Guatemala city, 5000 feet (*Champion*).

Head broad and short, of a dark metallic colour, coarsely and evenly punctate. Thorax very closely, evenly, and coarsely punctate; in greater part of metallic colour, but the sides and anterior margin yellow. Scutellum rather short, coarsely and deeply punctate. Elytra with deep striæ occupied by closely placed punctures; the interstices with rather large and distinct punctures, placed near one another and almost regularly, so as to form a series on each interstice. The basal portion of the legs, and also the middle and posterior tarsi are infuscate yellow. The mesosternal lamina is large; and its anterior angle forms only a very minute prominence. The basal ventral segment is carinate; and the fifth ventral segment has behind an emargination, the base of which is distinctly bidentate in the female, obscurely so in the male. The basal (apparent) joint of the front tarsus is distinctly dilated in the male.

I am not acquainted with any near ally of this obscure little *Berosus*.

HEMIOSUS.

Palpi maxillares parum elongati. Corpus subtus cum femoribus omnibus densissime subtilissimeque vix visibiliter pubescens, sericeo-opacum. Lamina mesosternalis magna, facie inferiore dilatata, anguste rhomboidali. Suturæ ventrales profundæ. Cetera fere ut in genere *Beroso*.

The little insect I have separated because of the above characters has the appearance of a small compact short-legged *Berosus*; but the peculiar silky opacity of the under surface is foreign to *Berosus* and the other Hydrobiini, and similar to what exists in *Hydrochus*; this pubescence extends over the femora, leaving only a small space at their extremity clear. The palpi are shorter than in any species of *Berosus*, and resemble those of *Hydrochus*. The antennæ are 7-jointed; joints first and second elongate, third much smaller, fourth small, lenticular; joints fifth to seventh forming an elongate loosely articulated club. Under surface of head strongly compressed, carinate in the middle. Front coxæ large, conical, exserted. Mesosternal lamina large, its lower face forming a narrow rhomboidal process, which is dull and pubescent, like the rest of the under surface. Middle of metasternum much detached, after the manner of *Berosus*, but to a still greater extent. Sutures between the ventral segments very deep, the first ventral

plate raised along the middle, forming a broad, flattened carina; the following segments with a short and therefore very inconspicuous elevation at the base in the middle; apical segment notched after the manner of *Berosus*. Legs of moderate length; intermediate and posterior tibiæ and tarsi rather feebly ciliate; all the tarsi 5-jointed, but the basal joint excessively short.

1. **Hemiosus maculatus.** (Tab. III. fig. 2.)

Oblongo-ovalis, convexus, capite thoraceque densius fortiter punctatis, metallescentibus, hoc utrinque versus basin foveola rotundata; elytris striatis, striis e seriebus regularibus punctorum majorum compositis, interstitiis fere impunctatis, testaceis plus minusve metallescentibus, maculisque magnis fusco-nigris: subtus nigricans, maxime opacus; pedibus testaceis, femoribus sericeo-opacis, fuscis, antennarum basi palpisque testaceis, his apice summo fusco.

Long. $1\frac{1}{2}$, lat. $\frac{3}{4}$ lin.

Hab. GUATEMALA, Pantaleon, 1700 feet (*Champion*).

Head broad, densely and coarsely punctate. Thorax strongly transverse, but narrower than the elytra; the sides nearly straight, scarcely narrowed behind; the surface entirely metallic, very densely and coarsely punctured, with a small round deep fovea close to the base on each side. Elytra with very regular series of very large and deep round punctures, placed very near one another, but each puncture separated from the rest by a distinct though very short transverse interstice: these series are ten in number; there is also another series concealed by being placed extremely close to the somewhat inflexed lateral margin, and also a short basal series between the first and second series: the colour is an obscure yellow, with large dark spots; but the surface has a rather strong metallic reflection, especially along the suture and about the dark spots and large punctures. The legs are of moderate length; the extremely fine dense pubescence on the femora renders them very dull; and the opaque portion is separated by an extremely abrupt line of division from the very polished, small, apical portion. The very fine pubescence of the under surface appears cinereous, or even almost white, in certain lights.

The colour and sculpture of the upper surface of this little insect remind one rather of *Helophorus* than of *Berosus*. I see no external sexual distinctions in the series of fourteen individuals sent by Mr. Champion; the apical ventral notch has a transverse emargination, as in many species of *Berosus*; and the base of this emargination is slightly prominent in the middle.

LIMNOCHARIS.

Limnocharis, Horn, Trans. Am. Ent. Soc. 1872, p. 144.

This genus was founded by Dr. Horn for a very minute insect found in the Californian mountains; but its validity as distinct from *Limnebius* is not quite clear to me. Dr. Horn relies for its isolation on the number of ventral segments, which he states to be eight, the terminal one being destitute of setæ; and he supplements this by alluding to the

fact that the tibiæ are not ciliate, and that the elytra are subacute at apex. I find, however, on examination of the insect I here describe as *Limnocharis sinuatus*, that the abdominal structure is essentially the same as that of *Limnebius*: viz. there are six true ventral plates, with a seventh more or less free and exposed; there appears to be no apical setæ; but on pressing the elytra, so as to make them gape, the presence of a minute apical tuft is revealed. The eighth segment alluded to by Dr. Horn will, I expect, prove to be some part of another internal segment extruded in his specimen (which was unique). In some, if not in all, of the European *Limnebii* there is no ciliation of the legs, these being more or less distinctly spinulose. The generic distinction of *Limnocharis* appears to me therefore to rest at present on the form of the apices of the elytra: and here the difference is conspicuous; the European *Limnebii* invariably have the extremities of the wing-cases truncate, exposing the apex of the hind body, while in *Limnocharis* the same parts are prolonged and acuminate.

Limnocharis, as will have been gathered from the above remarks, consists of a single minute Californian insect, probably very closely allied to the Guatemalan species, whose discovery we owe to Mr. Champion. I have no doubt that the two are at any rate congeneric, although the remarks I have made as to the discrepancy existing between the number of ventral segments as described by Horn and that seen by me in *L. sinuatus* might suggest the contrary.

1. **Limnocharis sinuatus.**

Ovalis, subdepressus, niger, sat nitidus, fere impunctatus, tenuissime pubescens; antennis, palpis pedibusque rufis, elytris ad apicem sinuatis et acuminatis.

Long. $\frac{5}{8}$ lin.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

This minute insect agrees with Dr. Horn's description of *L. piceus*, except that *L. sinuatus* appears to be less punctulate, and that the very observant American entomologist says nothing as to the elytra being sinuate just before the apex. The unique individual of *L. sinuatus* before me is, I think, a male: it has the middle of the metasternum delicately pubescent on each side; the sixth ventral plate is very short, and, owing to its arcuation, appears emarginate behind; and the following exposed segment is evidently very mobile and capable of being withdrawn within, as well as extruded from, the preceding segments. The legs are quite simple.

CHÆTARTHRIA.

Chætarthria, Stephens, Ill. Brit. Ent. v. p. 401 (1832).
Cyllidium, Er. Käf. Mark, p. 212 (1837).

Chætarthria is a very distinct genus of five or six species of minute beetles, one of these being European and another (doubtfully distinct, however,) Canarian, the other two or three being North-American. They are but little-known insects of very retiring habits; and their specific characters, so far as yet made out, are of the feeblest nature.

1. **Chætarthria bicolor.**

Rotundato-ovalis, sat convexa, testacea, capite nigerrimo, pectore abdomineque nigricantibus; elytris subtilissime punctatis, stria suturali elongata sed in tertia parte basali desinente; pedibus crassis.
Long. vix 1 lin.

Hab. GUATEMALA, near the city (*Champion*).

So far as I may judge from the solitary individual before me, this species is closely allied to the Californian *C. pallida*, Lec., but is rather larger and a little more elongate, and of brighter colour, the prothorax being clear yellow, without any trace of infuscation. The legs are very stout.

2. **Chætarthria punctulata.**

Rotundato-ovalis, convexa, nigra; antennarum basi, palpis pedibusque rufis, prothorace elytrorumque apice picescentibus; elytris crebre subtiliter punctulatis et pubescentibus, punctis ad basin sparsioribus, stria suturali profunda ante basin desinente.
Long. $\frac{3}{4}$ lin.

Hab. MEXICO, Cordova (*Sallé*).

I have seen but a single badly preserved individual of this species; but it appears very distinct by the evident punctuation of the elytra, the punctures towards the apex being rather close and each bearing a rather fine hair.

3. **Chætarthria glabra.**

Subglobosa, nigra, nitidissima, impunctata, prothoracis elytrorumque margine picescente; pedibus rufis, antennis palpisque testaceis, elytris stria suturali vix dimidiata.
Long. $\frac{3}{4}$ lin.

Hab. NICARAGUA, Chontales (*Janson*).

This little insect is distinguished by its extremely polished impunctate surface and the short sutural stria, which does not extend halfway to the base of the wing-case.

4. **Chætarthria læticula.**

Breviter ovalis, convexa, supra picescens, limbo dilutiore; antennis, palpis pedibusque testaceis; elytris posterius subtiliter punctatis, stria suturali dimidiata.
Long. $\frac{3}{4}$ lin.

Hab. GUATEMALA, San Gerónimo (*Champion*).

In this minute insect the punctuation of the wing-cases is more distinct than it is in the other Central-American *Chætarthriæ*, with the exception of *C. punctulata*, but it is not so coarse as in the European *C. seminulum*. The sutural stria becomes gradually obliterated in front, but may be traced for one half of the length of the wing-case. The colour of the under surface is even brighter than that of the upper, the breast being reddish yellow.

5. **Chætarthria pusilla.**

Breviter ovalis, convexa, nigra, prothoracis limbo laterali pallido; antennis, palpis pedibusque rufis; elytris versus apicem picescentibus, subtilissime punctulatis, stria suturali elongata, sed in tertia parte basali desinente.

Long. ½ lin.

Hab. GUATEMALA, Rio Naranjo 450 feet, Guatemala city (*Champion*).

This very minute insect is probably closely allied to the Californian *C. nigrella*, Lec.; but, although I have not the opportunity of comparing the two, I think it is most likely they are distinct.

EPIMETOPUS.

Epimetopus, Lacordaire, Gen. Col. i. p. 467 (1854).
Ceratoderus, Muls. (nom. præocc.) Mém. Ac. Sci. Lyons, i. p. 1 (1851).
Sepidulum, Lec. Trans. Am. Ent. Soc. v. p. 47 (1874); Sharp, Ent. Monthl. Mag. xi. p. 247.

This is one of the most interesting of the genera of Hydrophilidæ, and consists of four species—one East Indian, a second Colombian, and a third that may be either South or Central-American, its precise habitat being unknown.

The species are probably riparial rather than aquatic in their habits.

1. **Epimetopus costatus.** (Tab. III. fig. 3.)

Sepidulum costatum, Lec. Trans. Am. Ent. Soc. v. p. 47 [1].

Hab. NORTH AMERICA, Texas [1].—GUATEMALA, San Gerónimo, Rio Naranjo 450 feet (*Champion*).

HELOPHORUS.

Elophorus, Fabricius, Gen. Ins., Mant. i. p. 42.

This is a genus of about sixty species. It has a very wide extension in the northern portions of the eastern hemisphere; and ten or a dozen species have been described from North America. The species, even in distant parts of the world, are so very similar to one another that they can scarcely be distinguished by description or even by comparison.

1. **Helophorus aquaticus.**

Elophorus aquaticus, Oliv. Enc. Meth. vi. p. 381 [1].
Helophorus aquaticus, Muls. Col. Fr., Palp. p. 33 [2].
Elophorus grandis, Ill. Käf. Preuss. p. 272 [3].

Hab. MEXICO (*coll. Sallé*).—EUROPE and the Mediterranean region [1 2 3].

This species is represented by a single example from Sallé's collection; this specimen is very badly preserved, and has no special locality attached. Although it may possibly have found its place wrongly in M. Sallé's collection, yet I think it more probable that

it is really a Mexican example, and that the occurrence of the species in North America, though not hitherto recorded, may be expected.

2. **Helophorus regularis.**

Oblongus, subdepressus, capite thoraceque nigro-æneis, crebrius fortiter rugosis, hoc lateribus subrectis, basin versus leviter angustatis, angulis posterioribus obtusis, haud rotundatis; elytris striatis, striis fortiter et profunde punctatis, interstitiis æqualibus angustis; antennarum basi, palpis pedibusque testaceis.

Long. $1\frac{1}{2}$, lat. vix $\frac{3}{4}$ lin.

Hab. MEXICO, Guanajuato (*Dugès, coll. Sallé*).

This obscure species is remarkable from the very deep, coarse, and regular punctuation of the striæ of the elytra. It is closely allied to the European *H. æneipennis*, Th., but is narrower, and the elytra are more deeply striate, with the punctuation denser, more regular, and much coarser, and the interstices narrower; their colour is very obscure, with faint metallic reflection, and only very faint traces of black marks can be seen. According to Leconte's descriptions of the North-American species, the position of *H. regularis* is apparently between *H. linearis* and *H. lineatus*.

HYDROCHUS.

Hydrochus, Leach, Zool. Misc. iii. p. 90.

This is an isolated genus with about thirty named species. Although none have been yet described from South America, still the genus is represented there, as it is also in North America; it has, in fact, a very wide distribution in both eastern and western hemispheres.

1. **Hydrochus debilis.**

Parum elongatus, supra metallescens; antennarum basi, palpis pedibusque testaceis; prothorace elytris multo angustiore, posterius evidenter angustato, inæquali, foveolis magnis quinque; elytris pone medium evidenter latioribus, leviter inæqualibus, fortiter punctatis, interstitiis striarum angustis.

Long. $1\frac{1}{2}$, lat. $\frac{1}{2}$ lin.

Hab. GUATEMALA, Chontales (*Janson*).

Head uneven, sparingly punctate. Thorax much narrowed behind, about as long as broad, very uneven, the three large discoidal foveæ deep and distinct, the two lateral less distinct. Elytra rather short, a good deal broader than the thorax, and not parallel, becoming a good deal broader behind the middle; of a duller and paler metallic colour than the head and thorax. The rows of punctures are deep and coarse, and the interstices narrow; the second interstice is elevated for a short distance at the base, and the third interstice about the middle; the fourth interstice is slightly elevated just at the front of, and again behind, the third interstitial elevation.

This species, although no doubt closely allied to *H. rufipes*, Melsh., does not agree with Leconte's description of it or of any of the neighbouring species.

In Sallé's collection there is an individual (which has lost its head) that may be a variety of this species, but it has the thoracic foveæ deeper and longer; it is from Guanajuato, in Mexico.

2. **Hydrochus obscurus.**

Sat elongatus, supra metallescens; antennarum basi, palpis pedibusque testaceis, femoribus basi fuscis; prothorace elytris angustiore, posterius sat angustato, inæquali; elytris subparallelis, fere æqualibus, fortiter punctatis, striarum interstitiis angustis.
Long. $1\frac{1}{2}$, lat. $\frac{1}{2}$ lin.

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*).

This species is very closely allied to *H. debilis*, but the elytra are more parallel, and the interstices of the elytra are even or nearly so, there being only indistinct traces of the elevations on certain portions of the interstices that exist in *H. debilis*. The five individuals before me show considerable variation in the sculpture of the prothorax in regard both to the foveolæ and punctuation, the former being sometimes conspicuous, sometimes indistinct, and the latter varying in closeness.

OCTHEBIUS.

Octhebius, Leach, Zool. Misc. iii. p. 90.

This is a very distinct genus of about fifty described species of minute Hydrophilidæ. The registered species are principally natives of Europe. Seven species, however, have been described from North America, and there is no doubt the genus (many of the species of which inhabit salt and brackish waters) has a wide distribution. I am not yet, however, acquainted with any from South America. There is some difference of opinion as to whether the genus should be divided or not, Wollaston considering (Trans. Ent. Soc. Lond. 1871, p. 223) that *Calobius* is a valid distinct genus, and Bedel (Faune Col. Seine, i. p. 292) that *Henicocerus* of Stephens should be accepted. I have not at present thought it advisable to separate generically the remarkable *O. crassipes* from the other species here described; but if the above genera be accepted, then *O. crassipes* will form another distinct genus; it has the terminal joint of the palpi quite minute, but in some other respects departs widely from *Henicocerus*.

1. **Octhebius crassipes.** (Tab. III. fig. 4.)

Niger, supra lævigatus, nitidissimus; antennarum basi pedibusque sordide testaceis; prothorace magno, medio profunde canaliculato, lateribus undique membrana pellucida auctis.
Long. $\frac{7}{8}$, lat. vix $\frac{1}{2}$ lin.

Hab. GUATEMALA, Dueñas (*Champion*).

This species is remarkable on account of its highly.polished impunctate surface. The outline of the prothorax is very irregular; the front margin is sinuate on each side behind the eyes, then at the sides there is a small curved emargination near the front,

and behind the middle the sides are abruptly narrowed, so that a prominent minute acutely rectangular angle is formed some distance in front of the base; there is, however, a white pellucid membrane bordering all the side of the thorax, and even extending round the front, so as to fill up all the inequalities and project beyond them. The legs are rather short and stout; the anterior and middle tibiæ are rather broad and somewhat flattened, the middle tarsi quite thick.

Mr. Champion has sent three specimens of this minute but remarkable insect. It has some points of resemblance with the European subgenus *Henicocerus*, and it is probable, from its strong middle legs, that it adheres to rocks in rapid waters, as do the *Henicoceri*.

2. **Octhebius parvulus.**

Parvus, depressus, fuscus, capite thoraceque nigro-æneis, nitidis; antennis, palpis pedibusque sordide testaceis; vertice biimpresso; prothorace impunctato, canaliculato, sexfoveolato, marginibus valde irregularibus, membrana magna pellucida auctis; elytris haud striatis, sat fortiter seriatim punctatis, sat nitidis.

Long. $\frac{3}{4}$, lat. $\frac{3}{8}$ lin.

Hab. MEXICO, Guanajuato (*Dugès, coll. Sallé*).

Head without punctuation, with the clypeal suture very distinct, and two large definite impressions on the vertex. Prothorax strongly transverse, very irregular in outline, the front margin sinuate on each side behind the eye, and the side emarginate near the front, so that the front angle has the appearance of a lobe; again, behind the middle the side is deeply notched, so that the outline is very irregular, but a delicate very transparent membrane extends all along the side and fills up the irregularities, and is even continued all across the front margin; the surface is quite without punctuation and is shining, the middle is deeply channelled, there is a deep oblique impression on each side near the middle, and in front of this two other deep impressions. The elytra have rows of definite moderately coarse punctures; the interstices are impunctate and destitute of pubescence. The under surface is nearly black.

The Sallé collection contained three individuals of this species, under the name "*O. parvulus*, E. Dugès."

3. **Octhebius apicalis.**

Brevis, convexus, supra æneus; prothorace elytrorumque apice plus minusve rufescentibus; antennarum basi pedibusque testaceis, palpis fusco-testaceis; prothorace omnium fortissime dense punctato, medio canaliculato, disco utrinque oblique unifoveolato, lateribus ad angulos posteriores excisis, excisione membrana parvula completa; elytris profunde striatis, striis fortiter punctatis, interstitiis angustis, leviter inæqualibus; corpore subtus rufo-obscuro.

Long. $\frac{3}{4}$, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, Guatemala city (*Champion*).

This species is similar to the European *O. rufo-marginatus*; its coarse sculpture allows it to be readily distinguished from the other Central-American species yet

brought to light. The two individuals before me differ considerably *inter se*, one having the prothorax more red, less densely punctured, and with the dorsal foveolæ deep and distinct, while in the other specimen the latter are but indistinct; it is possible these may be sexual characters.

4. **Octhebius similis.**

Parum elongatus, capite thoraceque æneis, nitidis, hoc versus latera rufescente; elytris testaceis, æneo suffusis; antennis, palpis pedibusque testaceis; vertice profunde bifoveolato; thorace canaliculato, sat fortiter et crebre punctato, utrinque biimpresso, impressione anteriore magna, posteriore obliqua parva, angulis posterioribus excisis, excisione membrana parvula completa; elytris ad apicem attenuatis et acuminatis, striatis, striis crebre sat fortiter punctatis; corpore subtus rufo-fusco.

Long. 1, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, Guatemala city, 5000 feet (*Champion*).

This species appears to be very closely allied to the European *O. pygmæus*, but there is a deep and distinct, though small, oblique depression on each side of the thorax, and the large impression which separates the anterior angle from the rest of the surface appears to be rather deeper and more sharply defined; the sculpture of the elytra is also deeper and more distinct. In most other respects there is a great resemblance between the two. I have seen only a single individual.

5. **Octhebius obscurus.**

Sat elongatus, niger, subopacus; antennis, palpis pedibusque rufis; capite parce punctato, vertice biimpresso; prothorace transverso, parum punctato, ad angulos anteriores rugoso, utrinque impressione elongata parum profunda, lateribus ante basin angustatis, membrana pellucida auctis; elytris seriatim punctatis, parcius breviterque setosis.

Long. 1, lat. $\frac{1}{2}$ lin.

Hab. MEXICO, Guanajuato (*Dugès, coll. Sallé*).

Head very faintly and sparingly punctate, the vertex with two large impressions. Thorax only very sparingly and rather finely punctate, with an excessively fine almost obliterated channel on the disk, and on each side with a peculiar elongate sinuate longitudinal impression, extending nearly the whole length of the thorax; the sides in front are for a short distance straight, and are, after that, much narrowed to the base; a narrow white membrane extends along the oblique part of the side. The elytra are not striate, but bear very regular series of punctures, each puncture bearing an extremely fine, short, indistinct white seta; the interstices are impunctate and much broader than the series of punctures; the punctures of the series are well isolated from one another, each being separated from its neighbour by a space larger than the size of the puncture.

The three individuals before me show some variation in the punctuation of the thorax. The species may be placed near the European *O. pilosus*. It stood in the Sallé collection under the manuscript name of "*O. obscurus*, E. Dugès."

HYDRÆNA.

Hydræna, Kugelann, Schneid. Mag. v. p. 578; Kiesenwetter, Linn. Ent. iv. p. 156.

This is a very distinct genus of about thirty species of minute beetles. Those described are chiefly from the Mediterranean region; but three are known from North America, and one from Australia. The species are of very retiring habits; and although none are known from South America, Mr. Champion's discovery of several species from Guatemala renders it probable that the genus will be found to be represented in South America when the brooks and smaller watercourses of the mountainous regions there are investigated.

1. **Hydræna longicollis.** (Tab. III. fig. 5.)

Nigra; antennis, palpis, pedibus prothoraceque ad angulos anteriores testaceis, elytris fusco-testaceis; prothorace subquadrato lateribus tantum leviter curvatis, æqualiter crebre sat fortiter punctato, nitido; elytris nitidis, haud fortiter seriatim punctatis.

Long. $\frac{5}{8}$, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, San Gerónimo, Dueñas, Paso Antonio 400 feet (*Champion*); NICARAGUA, Chontales (*Janson*).

A small unattractive insect of feeble structure. Palpi very elongate and slender. Head black, the vertex closely and rather coarsely punctured. Prothorax nearly as long as broad, slightly curved at the sides, of a shining black colour, with a yellow spot at each front angle, and the front margin, as well as the sides, more or less yellowish. Elytra with numerous rather irregular rows of punctures; these are not large, and the interstices are shining. Beneath the prosternum is greatly shorter than the sides of the thorax, and is finely carinate all along the middle; metasternum depressed in the middle, but without lines or elevations. In this species the great abbreviation of the prosternum in comparison with the free sides of the prothorax is remarkable.

The small series of individuals before me show a good deal of variation; the yellow colour at the angles of the thorax sometimes extends all across, and the margins may be broadly yellow, leaving a quadrate mark of dark colour on the middle: the punctuation of the thorax and even its length appear to vary a little; but I find no evidence of specific distinction among the specimens.

2. **Hydræna puncticollis.**

Nigra, supra testacea, prothorace disco fusco, capite nigro; antennis, palpis pedibusque testaceis; prothorace subquadrato, lateribus tantum leviter curvatis, crebrius fortiter punctato; elytris nitidis, sat fortiter seriatim punctatis.

Long. $\frac{5}{8}$, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, Paso Antonio, 400 feet (*Champion*).

This species is very closely allied to *H. longicollis*, but the punctuation of the prothorax is so much coarser and closer that I cannot unite the two; the colour of the

upper surface is also paler, the prothorax being testaceous, with a fuscous mark on the middle.

Mr. Champion has sent only two individuals.

3. **Hydræna sordida.**

Nigra, supra fuscula, capite nigro; prothoracis elytrorumque lateribus parum argute testaceis; antennis, palpis pedibusque testaceis; prothorace transversim subquadrato, lateribus in medio leviter ampliatis, explanatis, dense fortiterque punctato, leviter inæquali; elytris fortiter seriatim punctatis.
Long. $\frac{5}{8}$, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, San Joaquin in Vera Paz and San Gerónimo (*Champion*).

Head very coarsely punctate; thorax also coarsely and closely punctate, with the surface rather uneven from some indistinct impressions, and the sides distinctly explanate; the width is a good deal greater than the length, the sides are finely and densely crenate, and slightly but distinctly narrowed both in front and behind. The elytra have the sides distinctly a little explanate, and bear numerous regular series of coarse punctures, which are less distinct at the apex than at the base.

This species is closely allied to *H. longicollis* and to *H. puncticollis*, but is of broader form, and the surface is more coarsely punctate, and the sides of the thorax are distinctly a little flattened out or explanate.

4. **Hydræna brevis.** (Tab. III. fig. 6.)

Brevis, latiuscula, testacea, opacula, vertice fusco; elytris sordidis lateribus testaceis; prothorace transverso, lateribus in medio angulatis, dorso inæquali dense rugoso; elytris omnium densissime fortiter sculpturatis.
Long. $\frac{3}{4}$, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, San Joaquin in Vera Paz and San Gerónimo (*Champion*).

Of unusually short and broad form. Head broad, opaque, vertex more obscure in colour than the front, coarsely but obsoletely punctate. Thorax a good deal narrower than the elytra, strongly transverse, the sides distinctly crenate, much narrowed in front and behind, so as to be angulate in the middle; the surface coarsely sculptured, opaque, and uneven. Elytra closely covered with series of extremely dense coarse punctures, so that the interstices are reduced to narrow lines; the surface is quite dull, and the sides are rather broadly explanate. The under surface is rufescent. The prosternum only very indistinctly carinate; the middle of the metasternum with a fine raised longitudinal line on each side near the extremity, and outside of this with an indistinct groove.

CYCLONOTUM.

Cyclonotum, Erichson, Käf. Mark. i. p. 212; Muls. Ann. Soc. Agr. Lyons, 1844, p. 167.
Cœlostoma, Brullé, Hist. Nat. v. p. 293.
Dactylosternum, Woll. Ins. Mad. p. 99 (subgen.).

This genus, including in it *Dactylosternum*, consists of thirty or forty species, and

has a very wide distribution in both hemispheres. The genus must be considered at present a composite one. Wollaston separated *Dactylosternum* for a Madeiran species (which has, however, a very wide distribution in other parts of the world); and the genus is adopted in the Munich Catalogue. Various species included by Mulsant and others in *Cyclonotum*, and recorded as such in the Munich Catalogue, will, however, have to be referred to *Dactylosternum* if that genus should prove valid, as is probable; this is the case with all the species of the genus here enumerated: the genus or sub-genus *Cyclonotum* proper appears, indeed, to be confined to the eastern hemisphere, while *Dactylosternum* has a wide distribution in both hemispheres. From the remarks appended to various descriptions it would appear that the species feed on decaying vegetable refuse, and are not inhabitants of the waters.

1. **Cyclonotum subdepressum.**

Cœlostoma subdepressum, Cast. Hist. Nat. ii. p. 58.
Cyclonotum subdepressum, Mun. Cat. ii. p. 495.

Hab. Mexico, Oaxaca, Jalapa (*Höge*); Cordova (*Sallé*); British Honduras, Belize (*Blancaneaux*); Guatemala, Las Mercedes 3000 feet, San Isidro 1600 feet, Pantaleon 1700 feet, Teleman, Chacoj, Panima, and Senahu (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba 800–1500 feet, Volcan de Chiriqui (*Champion*).—Antilles, Cuba; South America, Venezuela and Colombia.

This is apparently a very common beetle in Mexico, as well as in the more southern regions of Central America; it varies a good deal in size, but is nearly constant in other respects; the Nicaraguan and Panama individuals, however, have the three or four external series of punctures slightly finer and more regular than those from other localities.

2. **Cyclonotum dispar.**

Elliptico-oblongum, parum convexum, nigrum, nitidum, pedibus piceis; antennarum basi testaceo, palpis sordide testaceis; crebre sat fortiter punctatum, in capite punctis majoribus sparsis immixtis; elytris nullomodo striatis, seriebus fere æqualibus punctorum.

Long. 3, lat. $1\frac{5}{8}$ lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*).

Although I have seen only three individuals of this species, I have no doubt it is quite distinct from *C. subdepressum*, to which, however, it is very similar and very closely allied. The punctuation of the upper surface is rather coarser and more distant, and there are on the head some rather larger punctures mixed with the more numerous smaller punctures; this is especially notable on the vertex, and no trace of such an inequality of sculpture can be seen in *C. subdepressum*; besides this, the mentum is more rugosely sculptured and the tibiæ rather broader than they are in the commoner species. *C. dispar* is still more closely allied to the Californian *C. cacti*, Lec.; but the

individual before me of this latter species is considerably smaller and narrower, the punctuation is closer and finer, and there are no indications of the double punctuation of the head, such as exists in *C. dispar*.

The species was named in Sallé's collection "*C. opuntiæ*, Dugès in litt.;" but I have not adopted the name, as the other species of the genus are also fond of harbouring in the refuse of the *Opuntiæ* or prickly pears.

3. **Cyclonotum grossulum.** (Tab. III. fig. 7.)

Latum, elliptico-oblongum, nigerrimum, nitidum, antennarum basi, palpis pedibusque nigro-piceis, tarsis rufis; sat crebre et fortiter punctatum; elytris seriebus punctorum, externis grossis, internis ante basin desinentibus.

Long. $3\frac{1}{2}$, lat. $2\frac{1}{8}$ lin.

Hab. GUATEMALA, Las Mercedes 3000 feet, Capetillo, Guatemala city 5000 feet (*Champion*).

This is closely allied to *C. subdepressum*, but the individuals are of larger stature, and are very readily distinguished by the extremely large punctures forming the outer series on the wing-cases; the general punctuation of the upper surface is slightly finer and more distant.

4. **Cyclonotum centrale.**

Rotundato-ovale, convexum, nitidum, nigrum, pedibus piceis; antennarum basi, palpis tarsisque testaceis, antennarum clava opaca, sed haud infuscata; supra crebre, fere subtiliter punctatum; elytris seriebus punctorum majorum impressis, internis longe ante basin desinentibus.

Long. $2\frac{1}{4}$, lat. $1\frac{1}{2}$ lin.

Hab. PANAMA, Volcan de Chiriqui, 2000 to 4000 feet (*Champion*).

Upper surface rather finely punctate, the punctuation on the head rather coarser and closer than on the thorax; the elytral punctuation fine but distinct, and rather close about the middle of the basal region, but thence becoming more scanty, so that the apical and lateral regions are nearly impunctate, except for the series of punctures; these, however, are large, deep, and distinct; the six external series reach nearly to the base, the four inner series, on the other hand, become fainter towards the front, the sutural series being the shorter of the four. The club of the antennæ appears rather darker than the basal portion; but this is due apparently to the dense sensitive pubescence with which it is clothed rather than to any infuscation. On the lower face of the posterior tibia there is a single series of three spinigerous punctures parallel with the similar punctures of the outer edge. The prosternal carina is very abrupt and very prominent at the front.

This belongs to a group consisting of a few Tropical-American species, differing from the members of the subgenus *Dactylosternum* by the more rotund form and the less elongate basal joint of the antennæ.

5. Cyclonotum tibiale.

Rotundato-ovale, convexum, nitidum, piceo-nigrum, pedibus rufis; antennis, palpis tarsisque testaceis; supra crebre punctatum, elytris seriebus punctorum impressis, internis ad basin subtilioribus; tibiis posterioribus facie inferiore asperato-punctata.

Long. $2\frac{1}{8}$, lat. $1\frac{1}{4}$ lin.

Hab. GUATEMALA.

A single individual of this insect is the only one I have seen, and although very similar to *C. centrale* I feel no doubt it represents a distinct species; the series of punctures on the elytra are not quite so coarse, and the internal ones do not disappear altogether from the basal portion, although they are there much finer. The apical portion of the lower face of the hind tibia has much more sculpture than the same part in *C. centrale*.

The specimen has no indication of more special locality than "Guatemala."

PHÆNONOTUM.

Corpus hemisphæricum, supra glabrum nitidum, subtus subtilissime pubescens, opacum. Antennæ novemarticulatæ, articulis tribus ultimis clavam elongatam laxissime articulatam formantibus. Maxillæ mala tenuiora fere membranea. Palpi maxillares sat elongati, graciles, articulo secundo parum incrassato; labiales hirsuti. Prosternum brevissimum. Metasternum anterius in medio carinato-elevatum, inter coxas intermedias longe productum, mesosterni parti elevatæ minutæ arcte conjunctum. Tarsi omnes quinquearticulati, intermedii et posteriores articulo basali quam sequens longiore, plus minusve incrassati. Elytra punctata sine stria suturali.

This genus is allied to *Cyclonotum*, but the structure of the middle parts of the meso- and metasterna present constant and well-marked distinctions; the metasternum is greatly produced in front and strongly elevated, and with this part the small central elevation of the mesosternum is closely combined; thus by the two pieces a small linear lamina is formed in front of the middle coxæ, simulating, in fact, the linear piece seen in *Cercyon*, from which, however, it is entirely different, this part in *Cercyon* being formed exclusively by the mesosternum, whereas in *Phænonotum* it is in larger part formed by the metasternum. In *Cyclonotum* this part of the mesosternum forms a broad angular piece, the front of which is very strongly margined on each side, while the posterior portion is more or less prolonged backwards to join the metasternal process. *Phænonotum*, moreover, has the middle pieces of the prosternum much shorter than in *Cyclonotum*, the parts of the mouth are more feeble, and the elytra are destitute of a sutural stria.

The genus is probably characteristic of the warmer portions of the New World, although the only species hitherto known (*Hydrophilus estriatus*, Say) is found in the southern portions of the United States of North America; but I am acquainted with several species found in the Amazon valley by Professor Trail.

1. **Phænonotum dubium.**

Rotundato-ovale, convexum, nigrum, nitidum; antennarum basi, palpis tarsisque testaceis, pedibus piceis, antennarum clava infuscata; capite thoraceque sat crebre subobsolete punctatis, elytris crebrius sat fortiter punctatis.
Long. $1\frac{3}{4}$, lat. 1 lin.

Hab. Mexico, Cordova, Vera Cruz (*Sallé*), Oaxaca (*Höge*); Guatemala, San Gerónimo, Dueñas, Guatemala city, Paso Antonio 400 feet (*Champion*); Costa Rica, Cache (*Rogers*).

Although extremely closely allied to the North-American *P. estriatum*, Say, Lec., I cannot consider this insect to be conspecific therewith; the head and thorax are more finely, and the elytra slightly more closely and finely punctate. As I have not been able to find in the series of specimens from the above various localities a single individual agreeing in these respects with the North-American species, I cannot treat the two as identical.

The North-American insect is said to occur also in Brazil; and if it really exists there, its occurrence in Central America may be anticipated*.

2. **Phænonotum apicale.**

Rotundato-ovale, convexum, nigrum, nitidum, prothoracis marginibus picescentibus, elytrorum apice transversim rufo-signato, subtus piceum; capite, prosterno, elytrorum margine inflexo pedibusque rufis, antennarum clava leviter infuscata, basi cum palpis tarsisque testaceis; capite thoraceque sparsim, hoc obsolete, punctatis, elytris crebre sat fortiter punctatis.
Long. $1\frac{3}{8}$, lat. $\frac{3}{4}$ lin.

Hab. Guatemala, Guatemala city (*Champion*); Nicaragua, Chontales (*Janson*).

Allied to *P. dubium*, but rather smaller, and readily distinguished by the transverse patch of bright colour at the extremity of the elytra; the punctuation of the upper surface is throughout rather more distant than it is in *P. dubium*.

3. **Phænonotum tarsale.** (Tab. III. fig. 8.)

Rotundato-ovale, convexum, nigrum, nitidum, prothoracis marginibus picescentibus, elytrorum margine laterali ad apicem rufescente; subtus capite, prosterno, elytrorum margine inflexo pedibusque piceis; antennis, palpis tarsisque testaceis, his subtus conspicue hirsutis; capite prothoraceque minus crebre, elytris crebre fortiter punctatis.
Long. $2\frac{1}{8}$, lat. $1\frac{1}{8}$ lin.

Hab. Panama (*colls. Godman et W. W. Saunders*).

* This may be the best place to notice *Cœlostoma minutum*, Cast. Hist. Nat. ii. p. 58, where a description occurs, consisting of the following diagnosis and measurements:—"Long. 1 lig. $\frac{1}{3}$, larg. $\frac{2}{3}$ lig. Corps ovale, convexe, d'un noir un peu brunâtre, couvert d'une ponctuation fine mais serrée; elytres non striées; palpes, extremité des antennes et tarses bruns. Mexique." I am unable to identify any species of the genus *Cyclonotum* or *Phœnonotum* with this description, and it may perhaps have been made from a species of another genus. I am not aware of any collection in which an example of Castlenau's species exists.

The individuals of this species are of larger size, and of slightly more elongate form, than is the case with the other allies in Mexico and Central America, and, in addition to this, the greater development of the pubescence on the tarsi is characteristic. There is no trace of infuscation of the club of the antenna; the punctuation of the head is fine and distant—if any difference, even more fine and distant than those of the thorax; the red coloration at the extremity of the wing-case consists of a transverse margin, extending forwards halfway or more to the shoulder, becoming gradually indistinct in front.

4. **Phænonotum collare.**

Rotundato-ovale, nigrum, nitidissimum, prothoracis marginibus picescentibus, subtus piceum, capite dilutiore, pedibus piceo-rufis; tarsis, palpis antennarumque basi testaceis, harum clava fusco-testacea, tarsis subtus sat conspicue hirsutis; capite subtiliter sparsim, elytris sat crebre et fortiter punctatis; prothorace valde transverso, sublævigato, tantum subtilissime distanter punctato.

Long. $1\frac{3}{4}$, lat. $1\frac{1}{8}$ lin.

Hab. NICARAGUA, Chontales (*Janson*).

Var. Paulo angustior etc.

Hab. GUATEMALA, El Tumbador, 2500 feet (*Champion*).

This species approximates in form to *P. tarsale*, and is in fact equally allied to it and to *P. lævicolle*; it is readily distinguished from the former by its shorter and less punctate thorax and the infuscate club of the antenna, as well as by other less conspicuous characters, while from *P. lævicolle* it differs by its larger size and less rotund form, as well as by the more hirsute tarsi. All the individuals before me agree in having the pale yellow labrum more exserted than in the other species; but this character may prove to be of no importance. The single individual found by Mr. Champion is a variety rather smaller in size and of darker colour, with the thorax slightly less abbreviate and more punctate. Additional specimens are needed to justify its treatment as a distinct species.

5. **Phænonotum lævicolle.**

Rotundato-ovale, convexum, nigrum, nitidissimum, prothoracis marginibus elytrorumque margine apicali picescentibus, corpore subtus piceo, pedibus rufis, tarsis dilutioribus; antennis palpisque testaceis, illarum clava fusco-testacea; capite parce subtiliter punctato; prothorace valde transverso, fere impunctato, elytris crebre fortiter punctatis.

Long. $1\frac{1}{2}$, lat. $\frac{7}{8}$ lin.

Hab. MEXICO, Cordova, Vera Cruz (*Sallé*); GUATEMALA, Cubilguitz (*Champion*); NICARAGUA, Chinandega, Managua (*Sallé*), Chontales (*Janson*).

The individuals of this species are very similar to *P. dubium*, but are nevertheless easily distinguished by the shorter thorax, the surface of which is considerably less punctate.

6. **Phænonotum rotundulum.** (Tab. III. fig. 9.)

Subrotundatum, convexum, nigro-piceum, nitidissimum, prothoracis marginibus capiteque anterius picescentibus, subtus piceo, capite prosternoque rufis; tarsis, palpis antennisque basi testaceis, harum clava fusco-testacea; capite thoraceque fere omnino impunctatis, elytris sparsim punctatis, punctis ad basin subtilioribus, minutis.

Long. $1\frac{1}{2}$, lat. 1 lin.

Hab. Mexico, Cordova, Toxpam (*Sallé*); Guatemala, San Gerónimo, Chacoj, San Juan and San Joaquin, Zapote, El Tumbador 2500 feet (*Champion*); Panama, Volcan de Chiriqui, 4000 to 6000 feet (*Champion*).

Of all the species this is the shortest and most rotund in form, and has the least punctuation of the upper surface; the head is more dilute in colour in front than it is in any of the other species, and this appears to be always the case, though sometimes not very conspicuously. The diminished punctuation allows the species to be readily enough distinguished from *P. lævicolle*, which is nearest to it in size and form.

CYCLOTYPUS.

Corpus hemisphæricum, supra nitidum, subtus subtilissime pubescens, opacum. Antennæ sat elongatæ, articulis intermediis haud transversis, clava laxissime articulata. Oris partibus dense hirsutis, mento anterius leviter impresso, palpis maxillaribus sat gracilibus, quam antennæ multo brevioribus. Prosternum ante coxas simplex, haud perbreve. Mesosternum ante coxas rhomboidale. Metasternum anterius inter coxas productum, sed haud longitudinaliter elevatum, sutura cum mesosterno haud consolidata, depressa. Pedes sat elongati. Tarsi omnes quinquearticulati, subtus hirsuti, intermediis et posterioribus articulo basali majore, incrassato, duorum sequentium longitudine.

This genus is established for two species differing in several points from the other allied genera, more especially in the structure of the sternal pieces along the median line. The front portion of the prosternum is very acuminate in the middle behind, but the point does not form a free projection, but is met by the lamina between the two coxal cavities, and this lamina behind forms a small emarginate process. The metasternum is connected in the middle in a comparatively only imperfect manner with the mesosternum; it is distinctly, though not greatly, produced in front, but is not elevated; the point of connexion with the mesosternum forms, indeed, a depression; the central piece of the mesosternum is rather large, and forms an angle in front, the two divergent sides being strongly margined; posteriorly it is produced backwards between the coxæ, so that it is thus of irregular rhomboidal form. The basal ventral plate is not carinate.

Although the facies is very different from that of *Cyclonotum* proper, it is apparently that genus, and not *Phænonotum*, that most approximates to *Cyclotypus*.

1. **Cyclotypus godmani.** (Tab. III. fig. 10.)

Subhemisphæricus, supra niger, nitidus, subtus piceus, pedibus rufis; antennis palpisque testaceis, illarum clava leviter infuscata; capite crebre sat fortiter punctato, prothorace valde transverso, nitidissimo,

sparsim obsoletissime punctulato; elytris sparsim subtiliter punctatis, cumque seriebus punctorum majorum, internis ad basin subtilioribus.

Long. 3, lat. $2\frac{1}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui, 2500 to 4000 feet (*Champion*).

The punctuation of the wing-cases, although very fine, is distinct; the series of large punctures are remarkably distinct, and consist of rather distant large punctures, not placed in striæ; the sutural series, however, after the basal portion, becomes a stria. The mentum shows an extraordinary sexual character in the male; its surface is opaque and flat and bears fine golden hairs, the base has a crista formed by such hairs very densely packed, and a similar crest divides the surface longitudinally in two halves; the edges and front are margined with fine hairs, which do not, however, form crests like the basal and middle series. In the female these basal and median crests are entirely absent, and the surface of the mentum shows a feeble punctuation and pubescence, as in many species of *Cyclonotum*.

2. **Cyclotypus latissimus.**

Subhemisphæricus, supra niger, nitidus, subtus piceus, pedibus rufis; palpis antennisque testaceis, harum clava subinfuscata; capite minus sparsim punctato; prothorace valde transverso, nitidissimo, sparsim obsoletissime punctulato; elytris sat crebre fere fortiter punctatis, cumque seriebus punctorum majorum, internis ad basin subtilioribus.

Long. 3, lat. $2\frac{1}{4}$ lin.

Hab. NICARAGUA, Chontales (*Janson*).

This species is very closely allied to *C. godmani*, but the punctuation of the elytra is considerably less fine, and the outline of the two species is somewhat different, owing to the afterbody in *C. latissimus* being more narrowed behind.

The species is described from a single badly preserved individual, which is apparently a female.

PEROCHTHES.

Corpus subhemisphæricum, supra nitidum, glabrum, subtus opacum, sed vix pubescens. Antennæ novemarticulatæ, articulo primo elongato, quam quinque sequentes longiore, articulis 7°–9^{m} clavam magnam compactam formantibus. Palpi maxillares parum elongati, articulo secundo incrassato. Prosternum brevissimum medio carinatum. Mesosternum in medio triangulariter prominulum. Coxæ intermediæ sat distantes, metasternum inter eas productum, cum mesosterno arcte conjunctum. Pedes breves, femoribus latis, tarsis brevibus, rigidis, quadriarticulatis.

The relation of this genus to the *Cyclonotum* group of genera, as well as to *Cercyon*, is considerable, although it is very different from any described form; the antennæ and head are of the *Cercyon* type, while the structure of the pieces round the middle coxæ is rather of the nature of what exists in *Cyclonotum*. The prosternum is excessively reduced on each side, so that a gap is left between the central piece and the side piece on each side; this central piece is slightly produced in front in the middle, and is

acuminate behind, so that it is of a very short and broad rhomboidal form, but in certain positions appears triangular, owing to the comparatively slight elongation of the middle in front. The central piece of the mesosternum is brought down to the plane of the middle of the metasternum, and forms thus, in front of the middle coxæ, an angular piece with a strong margin on each, exhibiting, in fact, what Mulsant, in speaking of *Cyclonotum*, calls the "arrow-head form;" this arrow-head sends backwards a piece which is closely connected with the rather broad front edge of the middle of the metasternum. The legs are short, with the femora very short and very broad, the front femora, indeed, being angular near the base; the tarsi are rather stout, quite short and rigid, the divisions between the joints being difficult to perceive; these articulations are, however, transverse, not oblique; the three basal joints are short, and differ little from one another in length, but the fourth joint is quite as long as the two preceding together. Although I cannot see certainly the base of the tarsus, it is possible that there may be a short basal joint (as seen in the anterior tarsus of *Cyclonotum*) concealed by the extremity of the tibiæ. The under surface of the body exhibits a peculiar opacity, such as is seen in *Cercyon*; the basal ventral plate is carinate in the middle. A special peculiarity of the insect is a prominence of the mentum and adjoining parts of the under surface of the head, as a consequence of which there occurs, just behind the mentum and insertion of the maxillæ, an abrupt transverse depression extending all across the head.

The size and form, the short legs, and small rigid tarsi give the insect a great resemblance to *Chætarthria*, from which genus it is in most other respects very different; and there can be no doubt that the place *Perochthes* should occupy is between the *Cyclonotum* group and the *Cercyon* group of genera.

1. **Perochthes globulus.** (Tab. III. fig. 11.)

Hemisphæricus, piceus, supra nitidus, pedibus rufis; antennis, tarsis palpisque testaceis; capite thoraceque impunctatis, nitidis; elytris vix striatis sed seriatim fortiter punctatis, seriebus ante basin desinentibus.
Long. $\frac{3}{4}$–$\frac{7}{8}$, lat. $\frac{5}{8}$ lin.

Hab. Mexico (*Sallé*), Jalapa (*Höge*); Guatemala, El Tumbador, 2500 feet (*Champion*).

Head without distinct sculpture, clypeal suture obliterated. Mentum with a very dense, excessively fine sculpture, rendering it quite opaque, but without pubescence, its lateral margins with a few yellow setæ. Thorax very closely applied to the elytra and accurately continuing their outline; its surface smooth, shining, and impunctate. Elytra with rows of very coarse punctures, which, however, do not reach quite to the base; the outer of these rows does not run parallel with the lateral margin, but touching it behind diverges much from it in front; interstices impunctate. Legs very short; femora short and extremely broad, the intermediate very finely but not densely punctate beneath, the hinder shining and impunctate.

HETERYON.

Corpus suboblongum, depressum; labrum exsertum valde transversum. Antennæ 8-articulatæ, articulis tribus ultimis clavam elongatam sat compactam formantibus. Palpi maxillares parum elongati, articulo secundo leviter elongato. Prosternum anterius in medio valde angulariter prominulum. Mesosternum in medio ante coxas carina humili munitum, carinula hac anterius angulo parvulo disjuncto. Abdominis segmentum basale ecarinatum. Tarsi parum elongati, rigidi, quinquearticulati, posteriores articulo basali quam sequens crassiore, sed parum longiore.

Although the characters of the obscure little insect for which I propose this name are somewhat anomalous, there can, I think, be no doubt that it should be placed at the commencement of the *Cercyon* group of genera. It has the appearance of a small *Dactylosternum*, but the exserted labrum and the peculiar armature of the mesosternum are more like what we find in the Hydrobiini. The mesosternum has in the middle an elongate but very slightly elevated longitudinal carina, and in front of it a slightly more prominent angle; this is similar to what exists in the genus *Berosus*, except that the development is less. The two individuals examined have been in very dirty condition; but I am pretty certainly right as to the structure of the tarsi, although I am not very sure as to the number of the intermediate joints of the antennæ; this, however, is unimportant, the formation of these organs being quite of the *Dactylosternum* type, with rather more compact club.

1. **Heteryon depressus.**

Suboblongus, piceus, supra nitidus, subtus opacus; antennis, palpis pedibusque testaceis; capite thoraceque crebrius parum fortiter punctatis; elytris striatis, striis latis, fortiter punctatis, interstitiis subitilissime subseriatim punctulatis.

Long. $1\frac{1}{4}$, lat. $\frac{5}{8}$ lin.

Hab. Mexico, Cordova (*Sallé*).

Basal joint of antennæ slender, but elongate, nearly as long as the maxillary palpi; club elongate, its terminal joint with acute apex. Eyes small, but prominent; head much immersed in thorax. Thorax, like the head, shining and with a rather close, not coarse punctuation. Elytra with broad striæ, in which are placed closely very coarse punctures; this sculpture extends from base to apex, and is similar throughout, except that the internal series are rather finer than the external; along the middle of each interstice are rather numerous excessively fine punctures. The mentum is large and broad, feebly emarginate in front, very opaque, owing to an excessively fine and dense sculpture, which extends also to the rest of the under surface of the head; breast and ventral segments quite dull, but not pubescent; femora not very broad, shining, scarcely punctate.

CERCYON.

Cercyon, Leach, Zool. Misc. iii. p. 95 (1817).

This is an extensive genus, of about eighty species, of small palpicorns, and has a

very wide distribution in both hemispheres, though only one or two species have as yet been indicated from South America. The species have not the aquatic habits of most of the other palpicorns, but inhabit the freshly dropped dung of herbivorous mammalia or decaying vegetable substances. It is one of the more neglected of the genera of Coleoptera, and the North-American entomologists have not completely worked out the species of their fauna.

1. Cercyon seriatus.

Rotundato-ovalis, convexus, nitidissimus, piceus, elytris nigro-piceis, corpore subtus rufo-piceo opaco, pedibus rufis; antennarum basi palpisque testaceis; capite sparsim subtiliter punctato, prothorace fere impunctato; elytris haud striatis, seriebus punctorum remotorum, internis subtilioribus, interstitiis impunctatis.
Long. 2, lat. $1\frac{3}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui, 2500 to 4000 feet (*Champion*).

Palpi elongate and slender, clear yellow; basal joint of antenna extremely elongate, much arcuate. Head very shining, sparingly and very finely punctate. Elytra with regular series of punctures, which are scarcely deepened to form striæ; the sutural series, however, is placed after the basal portion, on a distinct stria; the punctures of the outer series are much coarser than those near the suture, each puncture is separated by a broad space from the following ones; but the punctures of the internal series are rather linear, while the coarser external punctures are quite round. The legs are elongate.

This insect may be distinguished at a glance from its allies by the absence of striation on the wing-cases; the sculpture, combined with a similarity in size and form, give it a great resemblance to *Cyclonotum centrale*. It is described from a unique example.

2. Cercyon mexicanus.

Rotundato-ovalis, convexus, supra niger, nitidus, capite elytrisque ad apicem picescentibus, subtus piceus, opacus, pedibus rufis; antennarum basi palpisque testaceis; capite crebre sat fortiter, prothorace subtiliter, punctato; elytris striatis, striis versus apicem profundioribus, interstitiis posterius subconvexis, subtiliter sat crebre punctatis.
Long. 2, lat. $1\frac{1}{8}$ lin.

Hab. MEXICO, Cordova (*Sallé*).

Maxillary palpi elongate and slender for this genus; antennæ with elongate basal joint and very elongate club. Head very distinctly margined in front, somewhat closely and not very finely punctate. Thorax very shining, finely and sparingly punctate; elytra with deep and distinct striæ, which at the apex become deeper; the interstices are distinctly punctate, and are broad in front, but much narrower behind, and this, in conjunction with the greater depth of the striæ, makes them appear there to be convex. The mesosternal lamina presents a quite slender lower face.

3. **Cercyon insignis.** (Tab. III. fig. 12.)

Rotundato-ovalis, convexus, supra niger, nitidus, prothorace ad latera capiteque anterius picescentibus, subtus piceus, opacus, pedibus rufis; antennarum basi palpisque testaceis; capite sparsim subtiliter, prothorace sparsim obsolete punctato; elytris profunde striatis, striis crenatis, interstitiis posterius convexis, impunctatis.

Long. 2, lat. $1\frac{1}{4}$ lin.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

The highly polished surface of the wing-cases and their very deep striation are distinctive of this species, which in other respects appears to be very closely allied to *C. mexicanus*. The three individuals brought back by Mr. Champion are quite similar to one another.

4. **Cercyon mellipes.**

Sphæridium mellipes, Say, Bost. Journ. Nat. Hist. i. p. 172[1].
Cercyon mellipes, Mun. Cat. Col. ii. p. 498.

Hab. MEXICO[1].

I am not able to give any information about this insect. Say's short description does not agree with any Mexican representative of this family known to me, and indeed leaves it quite doubtful to what modern genus his insect should be referred. It is, however, placed in *Cercyon* by the authors of the Munich Catalogue; on what authority I know not, as Leconte, in the collected edition of Say's writings, allows this description to pass without any remark. It is quite possible that the species may be a large *Cercyon* of the *C. mexicanus* type.

5. **Cercyon politus.**

Ovalis, convexus, pernitidus, niger, elytrorum apice testaceo, pedibus rufis; antennarum basi palpisque testaceis; prothorace sparsim subtiliter punctato; elytris leviter striatis, striis internis ad basin haud impressis, interstitiis sparsim subtiliter punctulatis.

Long. $1\frac{5}{8}$, lat. $\frac{7}{8}$ lin.

Hab. MEXICO, Cordova (*Sallé*).

Head sparingly but distinctly punctured, shining. Thorax very shining, more or less piceous towards the sides, sparingly and finely punctate. Elytra very shining, with fine striæ, which are rather remotely punctate: these striæ all become finer towards the base; and the four or five inner consist in fact in their basal portion only of series of fine punctures, the interstices very sparingly finely punctate. The colour beneath is pitchy, rufescent towards the front; the mentum is much impressed, shining, and but little punctate; the mesosternal lamina is small, the prosternum finely carinate.

This insect is scarcely so large as the European *C. obsoletus*, but is rather broader and less convex in proportion. I have seen only two individuals of it.

6. Cercyon ebeninus.

Ovalis, convexus, nitidus, niger, pedibus piceo-rufis; antennarum basi palpisque rufis; prothorace crebre sat fortiter punctato; elytris profunde striatis, striis punctatis, versus apicem profundioribus, interstitiis sat crebre et fortiter punctatis.

Long. $1\frac{3}{8}$, lat. $\frac{7}{8}$ lin.

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*).

Head rather closely and coarsely punctate. Thorax rather less closely and coarsely punctate. Elytra deeply striate, the internal striæ rather fine and crenate; the punctures of the outer striæ, however, are large and definite; the punctuation of the interstices moderately close, quite distinct. The colour beneath is piceous, rufescent in front; the mentum is transversely rugose; the mesosternal lamina elongate, but very slender; the prosternum distinctly carinate along the middle.

I have seen only a single individual: compared with the European *C. obsoletus* it differs markedly by the deeper striation and less punctuation of the wing-cases; but the only conspicuous structural difference is that the tarsi are considerably less elongate; the mesosternal lamina, however, is slightly narrower.

7. Cercyon integer.

Rotundato-ovalis, convexus, nitidus, niger, elytris ad apicem irregulariter dilutioribus, pedibus rufis; antennarum basi palpisque testaceis; prothorace minus crebre et minus fortiter punctato, nitido; elytris profunde striatis, striis fortiter punctatis, interstitiis impunctatis, fere convexis.

Long. $1\frac{1}{4}$, lat. $\frac{3}{4}$ lin.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Guatemala city, San Gerónimo, Balheu, El Tumbador 2500 feet, Las Mercedes 3000 feet, Cerro Zunil 4000 to 5000 feet (*Champion*).

Head rather coarsely punctate, shining, flavescent in front. Thorax neither closely nor coarsely punctate. Elytra very distinctly striate, the striæ very distinctly punctured, and deeper towards the extremity, the internal a little finer at the base; the interstices almost impunctate. The mentum is very shining, and bears only a few very fine punctures; the mesosternal lamina is rather broad, shining, and almost impunctate; the metasternal pentagon is also small, and is shining and impunctate; the prosternum is very distinctly carinate.

The species appears to be not common, being represented in the collections by less than a dozen specimens. Like its congeners it varies much in colour, and a little in size and sculpture; but the only individual which is at all likely to prove to belong to a different species is the unique Mexican specimen: this is of slightly narrower form, and has a distinct though scanty punctuation at the base of the elytra, and the outer striæ not quite so deep.

8. **Cercyon prætextatus.**

Sphæridium prætextatum, Say, Journ. Ac. Phil. v. p. 190[1].

Hab. North America[1].—Mexico (*coll. Sharp*); Guatemala, Dueñas, Capetillo, Panajachel 5000 feet, Paso Antonio 400 feet (*Champion*).

9. **Cercyon variegatus.** (Tab. III. fig. 13.)

Ovalis, convexus, nitidus, testaceus, pectore capiteque nigris, hoc vertice testaceo-maculato, prothoracis medio elytrorumque humeris nigro maculatis; capite thoraceque crebrius punctatis; elytris striatis, striis fere simplicibus, versus apicem profundioribus, interstitiis ad basin crebre punctatis, versus apicem fere lævigatis.

Long. $1\frac{1}{4}$, lat. $\frac{3}{4}$ lin.

Hab. North America (*coll. Murray*).—Mexico, Cordova (*Sallé*), Jalapa and Oaxaca (*Höge*); Guatemala, Aceituno, San Gerónimo, Cubilguitz, San Joaquin, El Tumbador 2500 feet (*Champion*); Nicaragua, Greytown, Chontales (*Janson*).

This is apparently the most abundant of the Central-American species of *Cercyon*; it may be readily identified by its colour, and the fact that the striæ of the elytra are simply impressed lines, almost without trace of punctuation. The mesosternal lamina is very slender and feebly punctate; the shining pentagon on the metasternum is also very feebly punctate; the prosternal carina is distinct, but not very strongly elevated. The colour varies somewhat, especially as to the extension of the dark colour on the thorax and the under surface.

The record of the species as North-American is made on the authority of an individual from the collection of the late Andrew Murray, labelled "*variegatus* Deyr. n. sp., Am. bor."

10. **Cercyon subsignatus.**

Ovalis, haud latus, convexus, nitidus, niger, prothorace ad latera flavescente; elytris sordide testaceis, ad humeros plus minusve evidenter fusco signatis; antennarum basi, palpis pedibusque testaceis, vix infuscatis; prothorace subtiliter punctato; elytris leviter striatis, striis punctatis, apicem versus haud profundioribus, interstitiis ad basin subtiliter punctatis; prosterno in medio alte carinato.

Long. 1, lat. $\frac{5}{8}$ lin.

Hab. Guatemala, Quezaltenango 7800 feet, Guatemala city, Capetillo, Zapote, San Gerónimo (*Champion*).

Palpi yellow, very slightly infuscate. Head and thorax finely and rather closely punctate, very shining, the latter rather broadly yellow at the sides. Elytra of a sordid yellow or reddish-yellow colour, the shoulders generally dark, and the suture also more or less infuscate; they are finely striate, the striæ are punctate and are effaced at the apex, but the punctures are distinctly continued to the extremity; the interstices are very finely, and at the extremity very sparingly, at the base more closely punctate. The prosternum has a strongly elevated carina along the middle; the mesosternal lamina is rather coarsely punctate; the metasternal pentagon is finely

punctate, and its two posterior sides are continued forwards towards the outside of the middle coxal cavities as fine raised lines.

Like many others of the genus, the species varies a good deal in colour and a little in size and sculpture; but it and *C. armatus* may be distinguished from the other Central-American species of the genus by the fine raised lines which proceed forwards from the outer angles of the metasternal pentagon.

11. **Cercyon armatus.**

Ovalis, haud latus, convexus, nitidus, niger, prothorace ad latera anguste rufescente; antennis, palpis pedibusque fusco-rufis; prothorace obsolete punctulato; elytris levissime striatis, striis subtiliter punctatis, apicem versus haud profundioribus; prosterno altissime carinato, carina anterius rotundata.

Long. $1\frac{1}{4}$, lat. vix $\frac{3}{4}$ lin.

Hab. GUATEMALA, Quezaltenango 7800 feet, Quiche Mountains 7000 to 9000 feet, Totonicapam 8500 to 10,000 feet (*Champion*).

Palpi infuscate. Head rather closely and distinctly punctate. Thorax very indistinctly punctate. Elytra with extremely fine striæ, which are finely but distinctly punctate; the striæ are quite effaced at the apex, but the punctures are continued to the extremity; the two outer striæ are rather more distinct than the others; the interstices are only obsoletely and sparingly punctate. The carina of the prosternum is remarkable for its great elevation, and its front angle is broadly rounded; the mesosternal lamina is coarsely punctate; the metasternal pentagon is finely punctate, and its posterior two sides are prolonged forwards as a very distinct line to the outside of the middle coxal cavity.

Although very closely allied to *C. subsignatus*, I am not able to consider this insect conspecific therewith; the size is rather larger, the colour darker, the sculpture of the upper surface more obsolete, and the prosternal carina is remarkable for its extreme prominence. The species appears to have been found only at considerable elevations.

12. **Cercyon striatus.**

Minutus, breviter ovalis, sat convexus, nitidus, testaceus, capite thoraceque crebre subtiliter punctatis; elytris striatis, striis apicem versus profundioribus, interstitiis crebre subtilissime punctatis.

Long. $\frac{3}{4}$, lat. $\frac{3}{8}$ lin.

Hab PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Head and thorax closely and finely punctate. Elytra with fine but very distinct striæ, which become deeper behind; the striæ and the interstices are very finely punctate. The prosternal carina is only very slightly elevated; the metasternal lamina is excessively slender; the metasternal pentagon is obsoletely punctate, and its two posterior sides are continued forwards as very distinct lines towards the outsides of the middle coxæ.

I have seen only a single and quite immature individual; but it evidently represents

a very distinct species: the raised lines on the metasternum distinguish it from all the species of *Cercyon* here described, except *C. subsignatus* and *C. armatus*; and from these the slight elevation of the prosternal carina and the well-marked striation of the elytra render it very distinct.

PELOSOMA.

Pelosoma, Mulsant, Col. Fr. Palp. p. 184.
Cercyon, pars, auct. plur.

This genus is closely allied to *Cercyon*, and indeed has not yet been accepted by entomologists generally. It has consisted hitherto of a single species, falsely supposed to be European, a second species, however, having been indicated by Leconte as pertaining to it. I find the characters by which it is distinguished from *Cercyon* to be quite constant in the series of Central-American species here enumerated, and I think therefore the genus will prove a good one. It is probable that it is specially characteristic of the Tropical-American fauna; and in that case it is likely that Leconte's South-Californian species (if it really belong to the genus, as to which I am very doubtful) will prove to extend its habitat southwards beyond California.

1. **Pelosoma lafertei.** (Tab. III. fig. 14.)

Pelosoma lafertei, Muls. Col. Fr. Palp. p. 185[1].

Hab. Mexico, Cordova (*Sallé*); Guatemala, Guatemala city, San Gerónimo 3000 feet, Zapote, San Joaquin, Chacoj, Capetillo (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*). — South America, Bahia (*Castelnau*); Europe, Central France (*Laferté*)[1].

Although this species was described from an individual taken, or believed to have been taken, in Central France, yet I believe it is not a European insect; and I feel sure that the error arose from a mistake made by Laferté when he communicated his collection to Mulsant. The species has not been taken again in France, and is not included in Bedel's recent Synopsis of the *Cercyons* of France. Mulsant's type from Laferté's collection is now in my possession; and I cannot separate it specifically from the Tropical-American specimens. The species is apparently a very common one, and varies somewhat in the minor details of size, form, colour, and sculpture; and thus, though I have not seen a second specimen agreeing *exactly* with Mulsant's type, I believe it to be undoubtedly conspecific with the South-American individuals, from some of which it differs only by very minute and unimportant details.

2. **Pelosoma sordidum.**

Oblongo-ovale, subdepressum, supra nigrum vel rufum, nitidum, subtus picescens, pedibus rufis; tarsis antennarumque basi testaceis, harum clava obscuriore; fortiter punctatum; elytris æqualiter striatis, striis ad apicem parum profundioribus, sed internis haud subtilioribus.

Long. $1\frac{1}{8}$, lat. $\frac{3}{4}$ lin.

Hab. MEXICO, Cordova, Teapa (*Sallé*); GUATEMALA, Cerro Zunil 4000 feet, Tamahu, Senahu, Chacoj, Zapote, and San Gerónimo (*Champion*).

The punctuation of the head and thorax is coarse and rather close; the striæ of the elytra are deep and distinct, even the internal striæ are deep at the base; the striæ are punctate, but not coarsely, the interstices are rather closely and distinctly punctate. The legs are short and stout, strongly spinulose; the mentum is small, with a definite notch in front, and its surface is shining, with some rather coarse punctures about the base; the prosternal carina is moderately strongly elevated; the mesosternal central piece is rather narrow for this genus, and is coarsely punctate.

The species is readily distinguished from *P. lafertei* by its smaller size, more oblong and less convex form, coarser sculpture, shorter legs, and by some slight but good structural characters, the central piece of the mesosternum being narrower, and the mentum small, with a more definite notch in front. Like its allies it varies a good deal in size and the depth of the colour, and a little in the coarseness of the sculpture.

3. **Pelosoma prosternale.**

Ovale, convexum, nitidum, supra nigro-piceum, elytris apice late rufo, subtus piceum; pedibus, antennis palpisque testaceis; capite thoraceque sat crebre et fortiter punctatis; elytris haud striatis, sed subtiliter seriatim punctatis, interstitiis sparsim punctulatis; prosterno in medio altissime carinato, carinæ facie inferiore rotundata.

Long. $1\frac{1}{8}$, lat. $\frac{3}{4}$ lin.

Hab. MEXICO, Guanajuato (*Dugès, coll. Sallé*).

This species has completely the appearance of a *Cercyon*; but the generic characters are fully those of *Pelosoma*, and in addition it presents a structural character peculiar to itself: viz. the prosternal carina is very strongly elevated; but its greatest prominence is not in front, but in the middle; hence it presents below a rounded outline, and forms no angular prominence in front, as it does in the other species of the genus. The series of fine punctures that replace on the elytra the usual striæ are very even and regular, the punctures being throughout of one size; and even at the apex the series are not deepened into striæ. On the under surface the prosternum and ventral segments are obscure reddish in colour, the breast being darker.

4. **Pelosoma carinatum.**

Ovale, convexum, supra piceum, elytrorum apice rufescente, nitidum, subtus rufescens; antennis, palpis pedibusque testaceis; capite thoraceque crebre fortiter punctatis; elytris substriatis, striis subtiliter punctatis, interstitiis sparsim subtilius punctatis; prosterno in medio altius carinato, carinæ facie inferiore recta, anterius angulatim prominula.

Long. $1\frac{1}{8}$, lat. $\frac{5}{8}$ lin.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This insect is extremely similar to *P. prosternale*, although the prosternal carina is very different: this is strongly elevated; but its lower edge is straight and projects in

front as a well-marked rectangle. The sculpture of the elytra is very fine, the striæ being extremely fine, and obliterated rather than deepened towards the apex; the punctures on the striæ are finer and closer to one another than those forming the series in *P. prosternale*. The appearance of the insect is quite that of an ordinary *Cercyon*, the European *C. lateralis*, Marsh., for example. The species is described from a single individual.

5. **Pelosoma cercyonoides.**

Breviter ovale, convexum, piceum, nitidum, elytris nigricantibus; antennis, palpis pedibusque testaceis; capite thoraceque fortiter et crebre punctatis; elytris substriatis, striis sat fortiter punctatis, interstitiis sparsim punctatis; prosterno in medio subtiliter carinato.
Long. 1, lat. $\frac{5}{8}$ lin.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

The head and thorax are rather closely and deeply though not very coarsely punctate, the punctuation of the latter not, however, quite so close as that on the head; the striæ of the elytra, though not deep, are very distinct, and are a little deepened behind; the interstices are very shining, and rather sparingly and finely punctate. The prosternal carina, though but little elevated, is very definite, and forms a very minute prominent angle in front. The basal portion of the mentum is coarsely punctate, as is also the central piece of the mesosternum.

The species is described from a single individual. Although very similar to *P. subcarinatum*, it is very readily distinguished by the more punctate surface and the less obsolete prosternal carina; it is also rather less rotund in outline.

6. **Pelosoma subcarinatum.**

Rotundato-ovale, convexum, supra nigricans, anterius rufescens, nitidum, subtus rufo-testaceum; antennis, palpis pedibusque testaceis, illarum clava subinfuscata; capite thoraceque sparsim subtiliter punctatis; elytris anterius subtiliter seriatim punctatis, ad apicem leviter striatis, interstitiis sparsim punctatis; prosterno in medio obsolete carinato.
Long. 1, lat. $\frac{5}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

At the base of the elytra the striation consists of series of very fine but closely placed punctures; at the extremity, however, these series are deepened so as to form shallow striæ. The mentum is polished and shining, without punctures; and there are also only a few punctures on the middle of the breast and mesosternum. The fine, only very slightly elevated carina of the prosternum is peculiar to this species of the genus, and, in combination with the less punctate surface, renders it very readily identified.

Mr. Champion has sent three individuals.

NITIDULODES.

Corpus subdepressum. Labrum haud occultum. Mentum bilobum. Coxæ anteriores haud omnino contiguæ. Prosternum carinatum. Mesosternum in medio tabula magna anterius acuminata, posterius cum metasterno sutura recta arcte conjunctum. Characteres ceteri fere ut in genere *Pelosomate*.

This insect with many of the characters of *Pelosoma* combines some others peculiar to itself. The labrum is exposed and is very transverse, but not corneous; and the mandibles may be seen on either side of it as slender, curved hooks. The mentum has in the middle a deep excision reaching halfway to the base and so rendering it bilobed. The prosternum is very strongly carinate along the middle; and the termination of this carina behind does not appear acuminate (as it does in *Pelosoma* and *Cercyon*, in both of which, however, it is really minutely notched at the apex), but, owing to a slight separation of the coxæ, exposes a notch the face of which is directed obliquely forwards. The largely developed central piece of the mesosternum is similar to that of *Pelosoma* except for its greater size.

1. **Nitidulodes jansoni.** (Tab. III. fig. 15.)

Ovalis, latiusculus, subdepressus, supra nitidus, rufus, elytris nigris, capite thoraceque læte rufis; antennarum basi palpisque testaceis, subtus opacum; femoribus, metasterni mesosternique mediis nitidis; capite prothoraceque crebre punctatis; elytris leviter striatis, striis internis versus apicem profundioribus, interstitiis sat crebre et sat fortiter punctatis.

Long. 2, lat. $1\frac{1}{4}$ lin.

Hab. NICARAGUA, Chontales (*Janson*).

Club of antennæ very broad and flat; front tibiæ broad, rounded externally and strongly spinulose. Upper surface very shining; the striæ of the elytra fine and but little impressed, the three or four next the suture, however, are a good deal deepened at the extremity; the punctuation of the striæ is rather indistinct, but renders them nearly crenate; the punctuation of the interstices is rather more distinct at the sides and apex than it is near the suture. The middle tibiæ are broad and short, the hind ones rather more elongate.

Two individuals of this species have been in my collection for many years; and the two in Mr. Godman's appear to have been taken at the same time as my own; so that Mr. Janson presumably only once found the species, which probably has a different mode of life from its allies.

OOSTERNUM.

Corpus supra tenuiter pubescens, subtus nudum, opacum. Elytra profunde sculpturata. Mentum anterius profunde impressum. Palpi maxillares tenues, parum elongati. Prosternum in medio elevatum, carinatum; pronotum haud inflexum. Mesosternum in medio tabulam ovalem formans. Tibiæ spinulosæ. Tarsi parvi, quinquearticulati, posteriores articulo primo quam secundus paulo longiore.

The minute insect separated under this name is closely allied to *Cercyon*, but differs from that genus by numerous details, nearly all of which are points of approach to

Cryptopleurum. The middle of the prosternum is distinctly differentiated from the sides, so as to form a kind of small table, which, however, is not flat as in *Cryptopleurum*, but the sides are sloping or roof-like, and it is raised and carinate along the middle. The central piece of the mesosternum is broader than in *Cercyon*, and forms a narrowly oval piece, which behind is not accurately connected with the metasternum. The legs are short, the tibiæ rather strongly spinulose; the tarsi feeble.

1. **Oosternum costatum.** (Tab. III. fig. 16.)

Minutum, ovale, rufum, opacum, supra tenuiter pubescens, plus minusve fuscescens; antennarum basi, palpis pedibusque testaceis; prothorace irregulariter haud dense punctato; elytrorum interstitiis alternis versus apicem costato-elevatis, ceteris versus apicem humilioribus; mesosterni medio fortiter punctato.

Long. $\frac{3}{4}$, lat. $\frac{3}{8}$ lin.

Hab. MEXICO, Puebla (*Sallé*); GUATEMALA, Guatemala city, El Reposo 800 feet, Coatepeque 1300 feet, El Tumbador 2500 feet (*Champion*); NICARAGUA, Chontales (*Janson*).

Head finely punctate, dull. Thorax distinctly margined at the sides, the surface rather irregularly punctate, the punctures not being all of one size and not at regular distances from one another; there is a scanty and fine but rather elongate pubescence. Elytra very deeply sculptured, the alternate interstices towards the apex being very much raised; and this is the more remarkable as those next them are more flattened; the striæ are punctate, and the intervals pubescent. The central piece of the mesosternum bears very coarse punctures; the middle of the metasternum is shining and bears some coarse punctures, the sides and ventral segments dull and impunctate.

Many specimens of this species have been sent by Mr. Champion: they vary a good deal in the colour of the body, and but little in other respects; neither do the single individuals from Mexico and Chontales show any important variation.

MEGASTERNUM.

Megasternum, Mulsant, Col. Fr. Palp. p. 187.

This genus consists of four species—one European, one North-American, and two Japanese. The species, however, do not agree very satisfactorily *inter se*, and it is probable that they will have to be separated as distinct genera. The species here described would in that case form also a distinct genus, approximating in several respects to *Cryptopleurum*. I am unacquainted with the North-American species ascribed with some hesitation by Leconte to the genus; but from his description and remarks (Proc. Ac. Phil. 1855, p. 374) it appears very improbable that it is congeneric with the European insect.

1. **Megasternum strigicolle.** (Tab. IV. fig. 1.)

Ovale, perconvexum, angustulum, nigrum, nitidum, parcissime pubescens; antennarum basi, palpis pedibusque

testaceis; capite thoraceque dense subtilissime aciculato-strigosulis; elytris striatis, striis internis subtilioribus, externis remote crenatis; pectore abdomineque basi sat fortiter punctatis.
Long. $\frac{7}{8}$, lat. $\frac{1}{2}$ lin.

Hab. GUATEMALA, Cubilguitz (*Champion*); NICARAGUA, Chontales (*Janson*).

The narrow oval form attenuated behind, and the excessively convex upper surface, combined with the peculiar sculpture of the head and the thorax, make this species easily recognized. The pubescence of the upper surface is very scanty and fine, and so is not readily noticed. The apical portion of the elytra is usually somewhat paler, as in many other of the allied species. The front tibiæ are slender and without any trace of emargination; and their outer margin bears only exceedingly minute spines, while the middle and hind tibiæ are quite unarmed. Owing to the very convex and peculiar form, the length of the prothorax is about twice as great along the middle as it is at the lateral margin.

DELTOSTETHUS.

Corpus convexum, latum, elytris sulcatis. Mentum magnum, basi parum prominula. Palpi maxillares graciles, parum elongati, articulo secundo basi tenui, apice incrassato. Coxæ anteriores haud contiguæ. Prosternum in medio elevatum sed haud planum, carinatum, posterius emarginatum. Coxæ intermediæ sat distantes. Mesosternum in medio pentagonum elongatum formans, pentagoni angulis parum discretis. Tibiæ fere espinulosæ.

This genus should be placed between *Oosternum* and *Cryptopleurum*. It differs from the former in numerous points of structure, of which the most important and easily observed is the shape of the central piece of the mesosternum: this forms a large, flat, but strongly margined tablet in front of the middle coxæ; this pentagon is quite as long as, or longer than broad, and its lateral angles are but little marked, so that it approximates in form to a broad oval. From *Cryptopleurum* the genus is very distinct by the less widely separated middle coxæ and the different shape of the mesosternal tablet, by the structure of the middle of the prosternum, which, though very distinctly differentiated from the lateral parts, is not flat and is strongly carinated along the middle; the margins of the prothorax, too, form sharp edges and are not inflexed.

I am not acquainted with any species of the genus other than the two discovered by Mr. Champion.

1. **Deltostethus sulcatus.** (Tab. IV. fig. 2.)

Rotundato-ovalis, posterius acuminatus, niger, subtus picescens vel rufescens; capite thoraceque crebre, profunde punctatis, opacis vel parum nitidis; elytris nitidis, profunde sulcatis, sulcis crenatis, interstitiis haud punctatis, vix pubescentibus; antennarum basi, palpis pedibusque testaceis.
Long. 1, lat. vix $\frac{3}{4}$ lin.

Hab. GUATEMALA, Purula, Senahu, San Juan in Vera Paz, Capetillo, Las Mercedes 3000 feet (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

The species varies much in colour, being sometimes very black, becoming in other specimens more dilute, and when rather immature is sordid yellow; the mentum is

very dull, being entirely covered with a peculiar excessively minute sculpture, amongst which can be detected a few larger punctures; the lateral grooves on the wing-cases are broader than those near the suture, and their sculpture therefore more conspicuous. The broad pentagonal (or nearly hexagonal) space on the middle of the metasternum is shining and coarsely punctate, the lateral parts being dull.

The species is apparently rare, one specimen only coming from each locality. The individuals show minute differences, but none that could with propriety, on such evidence, be considered specific. The individual from Panama has on the very black elytra a transverse fascia of minute yellow marks behind the middle.

2. **Deltostethus palpalis.**

Rotundato-ovalis, latissimus, posterius acuminatus, niger, nitidus; antennarum basi, palpis pedibusque testaceis; capite dense punctato, opaco; prothorace in medio sparsim subtiliter, versus latera fortius punctato; elytris late profundeque sulcatis, sulcis crenatis, interstitiis impunctatis.

Long. $1\frac{1}{8}$, lat. fere 1 lin.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Basal joint and club of antennæ very elongate, the middle joint of the club being but little transverse. Maxillary palpi also elongate and slender, the second joint comparatively little dilated. The pentagonal space on the metasternum is densely and coarsely punctate.

This species, although bearing a great resemblance to *D. sulcatus*, differs so much in the details of structure, that it may perhaps prove to be generically different. The palpi are elongate and slender, the anterior coxæ more widely separated, and the angles of the mesosternal tablet are so much effaced that it is almost circular in form: this latter character is sufficient to distinguish the insect from all other species of the *Cercyon* group of genera.

CRYPTOPLEURUM.

Cryptopleurum, Mulsant, Col. Fr. Palp. p. 188.

This genus at present comprises five species, viz. two European and one North-American, the others being from Ceylon and the Cape of Good Hope. Whether these will ultimately all prove congeneric, however, is quite doubtful. The Mexican species here described differs, indeed, structurally from the European species, the middle pieces of the pro- and mesosternum being much smaller, and the mentum very short, with its base but little protuberant. It would, however, be unadvisable to separate the insect as a distinct genus on these accounts from its allies.

1. **Cryptopleurum impressum.**

Rotundato-ovale, convexum, nigrum, nitidum, omnino tenuissime pubescens, supra sat crebre et fortiter punctatum; elytris ad basin leviter, ad apicem profunde striatis; antennis, pedibus elytrorumque apice rufis, palpis testaceis; subtus metasterno fortiter punctato, nitido, in medio late impresso.

Long. $\frac{7}{8}$, lat. $\frac{5}{8}$ lin.

Hab. Mexico, Cordova (*Sallé*).

Head rather finely punctate, shining. Thorax also shining, not closely, and moderately coarsely punctate. The striæ on the elytra are at the base scarcely impressed, and consist there rather of simple series of moderately large punctures.

I have seen only two specimens.

Fam. HETEROCERIDÆ.

HETEROCERUS.

Heterocerus, Fabricius, Ent. Syst. i. p. 262; Kies. Naturh. Zeit. iv. p. 194; Linn. Ent. v. p. 281.

The single genus *Heterocerus* is itself nearly the same thing as the family Heteroceridæ; for in addition to *Heterocerus* there is but a single (Australian) species that can be assigned to the family. *Heterocerus* is a genus of wide distribution, occurring throughout the continents of the eastern hemisphere and in Australia, while in the New World there are numerous species in North America. They are small insects, living in burrows in mud and sand in the immediate neighbourhood of water; and it is probable that the species are much more numerous than the seventy or eighty at present described. To the peculiar habits and unattractive character of these insects is probably due the fact that only one or two species have yet been described from South America; a like small number are known from the Antilles. The species of the genus, even in the most distant regions of the world, are singularly like one another in size and other details from which the specific characters of Coleoptera are usually drawn; and the study of the genus is thus a matter of considerable difficulty, and will of course become still more difficult as the record of species becomes more complete. Schiödte, a few years ago, pointed out (Nat. Tidss. 1866) some characters by the aid of which the European species may be grouped satisfactorily; and in studying the species here enumerated I have observed another character that will be of further assistance: this is the existence in certain species (European and North-American as well as Central-American) of a curved raised line proceeding outwards from the middle of the lower border of the intermediate coxal cavity and connecting it with the epimeral suture in such a manner as to form, in combination with the hinder part of this suture, a raised curved elevation of considerable length. The position of this curved line in relation to the middle femur is such as to suggest that it might prove to be a portion of a stridulating-organ, like the curved elevation on the first ventral segment of these insects; but I can find no further grounds for considering this to be probable.

1. **Heterocerus debilis.** (Tab. IV. fig. 3.)

Minutus, angustulus, sat elongatus, testaceus, capite fusco, subtilissime punctatus, pube tenuissima vestitus, opacus; prothorace convexiusculo, angulis posterioribus immarginatis; tibiis anterioribus spinulis crassiusculis armatis.

Long. 1, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, Panzos and Teleman (*Champion*).

By its minute size, fine sculpture, and pallid colour this species greatly resembles the European *H. flavidus*, from which, however, it is quite distinct by the immarginate base of the prothorax; the front tibiæ are broad, and the spines with which they are armed are rather broader and less acuminate than in other species of the genus.

I have seen only two individuals: in one of them the middle of the metasternum and ventral segments is a little infuscate.

2. **Heterocerus armatus.** (Tab. IV. fig. 4.)

Fusco-niger, pube densa brevissima vestitus, fere opacus, elytris maculis octo rufis; antennarum basi pedibusque testaceis, tibiis nigro lineatis; prothorace elytris paulo latiore, densissime subtiliter punctato, basi utrinque ad angulos posteriores marginata; elytris obsolete striatis, subtiliter punctatis; labro apice emarginato-truncato.

Mas mandibulis valde prolongatis, apice acuminato, ante apicem superne dente elongato armatis; labro elongato, lateribus sinuatis.

Long. $2\frac{1}{2}$, lat. $\frac{7}{8}$ lin.

Hab. MEXICO, Tuxtla (*Sallé*).

The form of the labrum and mandibles in the male of this species is very remarkable: the apical half of the former is considerably narrower than the basal portion, the narrow apex being nearly truncate, the sides at the base are rounded; some portions of the maxillæ project beyond the labrum, and cause this to appear longer than it really is, and as if it were acuminate; the detached free membranous lobe is quite separate from the body of the mandible, and appears as if it sprang from the interior of the mouth; though it is very detached, it is easily overlooked, owing to its being perfectly transparent. The female has the parts of the mouth of normal structure. The pale markings of the elytra consist of four detached spots on each, and at the apex the lateral margin is narrowly pale.

I have seen only a single male and two females, in very bad preservation. *H. gnatho*, Lec., from California, is no doubt a species allied to this.

3. **Heterocerus simplex.**

Sat elongatus, opacus, fuscus, elytris margine laterali et signaturis magnis, antennarum basi pedibusque testaceis, tibiis fusco-testaceis; prothorace subtilissime punctulato, angulis posterioribus marginatis; metasterno mutico.

Long. $2\frac{1}{8}$, lat. $\frac{3}{4}$ lin.

Hab. MEXICO, Vera Cruz (*Höge*).

Mandibles much curved externally, short, and stout, at the apex inwardly with three very distinct, equal, and equidistant teeth, the apical one of the three being the point of the mandible. Labrum short and broad, but little ciliate, so that in front it is seen to be very distinctly emarginate. The thorax is extremely finely punctate, and its base on each side is very finely marginate; the side itself, however, is almost immarginate.

Elytra dark fuscous, very finely and evenly pubescent and indistinctly punctate, the lateral margin narrowly yellow from the base to the apex: in front of the middle are three yellow marks; the most anterior is a longitudinal one placed on the middle of the width a little behind the base; between this mark and the suture, but placed further back, there is a similar yellow mark, and at the outside a curved humeral mark connecting with the yellow lateral margin; the most posterior point of this curved mark reaches just as far back as does the anterior sutural mark; a large zigzag mark behind the middle connects also with the yellow margin; and at the apex there is a longitudinal mark connected with a dilatation of the marginal yellow colour so as to form a hamate mark. The colour of the under surface is variable, but is a mixture of fuscous and yellow. There is no trace of any oblique line on the metasternum. Although an obscure and ordinary species in appearance, this is readily distinguished from those resembling it, by the absence of the raised line on the metasternum.

4. **Heterocerus mexicanus.**

Parum elongatus, opacus, fusco-testaceus, elytrorum signaturis magnis pedibusque testaceis; prothorace transversim sat convexo, densissime subtilissimeque punctato, angulis posterioribus marginatis; elytris obsolete punctatis, pube tenuissima æqualiter vestitis, signaturis testaceis sæpius vage extensis, præsertim circa scutellum; metasterno linea obliqua munito.

Long. 2, lat. $\frac{3}{4}$ lin.

Hab. MEXICO, Guanajuato (*Sallé*); GUATEMALA, Duenas, Panjachel 5000 feet (*Champion*).

A rather narrow but not elongate insect, with vague coloration. Mandibles quite short; front of head and surface of labrum densely pubescent, the front of the latter nearly truncate, scarcely emarginate. Thorax rather convex, fusco-ferruginous, margined about the hind angles. Elytra dull, not at all striate, very finely punctate, and very finely and delicately pubescent, the pubescence being without the least appearance of pruinosity (or shining particles); they are dark in colour, but have very large yellow marks, which occupy one half or more of their area, according to the amount of their extension; there is a yellow basal mark close to the scutellum, one behind this near the suture, a subhumeral one, these three more or less vaguely extended and confluent, so as sometimes to make the whole of the basal portion of the wing-cases pale; behind the middle there is a large irregular mark extending inwards and forwards and in front reaching the middle; and there is a large apical pale mark dilated at the margin, and joining there the postmedian mark. Beneath the colour is fusco-ferruginous, the prothorax being yellow; the tibiæ are but little infuscate. The raised line under the middle femur is very distinct. The front tibiæ are very broad; and the spines with which they are armed are stout.

The species appears to be rather variable; the individuals from Guatemala are rather broader, and the upper surface is darker, with the pale spots more definitely limited,

than is the case with the specimens from Mexico; but I cannot find any satisfactory evidence of specific distinction.

5. **Heterocerus spinifer.**

Parvus, sat latus, opacus, subtilissime pubescens, nigro-fuscus; elytrorum signaturis mediocribus pedibusque testaceis, tibiis fuscis; prothorace lato, fortiter transverso, ad angulos posteriores marginato; metasterno linea obliqua munito.

Long. $1\frac{3}{8}$, lat. $\frac{1}{2}$ lin.

Hab. GUATEMALA, Paso Antonio 400 feet, Guatemala city (*Champion*).

The thorax in this species has only an extremely delicate pubescence. The elytra are obsoletely striate, very finely punctate, and with an extremely short and fine pubescence; there is a basal pale mark on each side of the scutellum, one near the suture in front of the middle, and external to this a small spot to represent the humeral mark; there is a postmedian rather large spot, and at the outer and hinder angle of this another spot, not quite reaching a small mark at the margin; and, also disconnected with this latter, there is a small anteapical spot. The metasternal line is distinct; and the front tibiæ are armed with slender spines.

The species is described from two rather immature individuals from Paso Antonio; a third specimen from the same locality is but little more than a line in length, and has the pale spots on the elytra rather larger; the unique individual from Guatemala city has the pubescence of the upper surface not quite so short and delicate. Whether these two specimens are varieties or distinct species is very doubtful to me.

Fam. PARNIDÆ.

Up to the present time nothing has been known about the Central-American forms of this family. Mr. Champion's successful work, however, has informed us that the Parnidæ are as well represented in Central America as in any other part of the world; for he has collected about as many species and quite as great a variety of genera as exist either in Europe or in North America; and very little is known of the Parnidæ from other regions. It is probable that all the Parnidæ are aquatic or subaquatic in their habits. Not more than one hundred and fifty species of the family are existent in collections.

Subfam. *PARNINI.*

DRYOPS.

Dryops, Leach, Zool. Misc. iii. p. 88; Latr. Gen. Crust. et Ins. ii. p. 56; Er. Ins. Deutsch. iii. p. 517.

Pomatinus, Sturm, Ins. Deutsch. xxii. p. 62.

Helichus, Er. Ins. Deutsch. ii. p. 510 (note); Horn, Tr. Am. Ent. Soc. 1870, p. 31.

The genus *Helichus*, to which the New-world species of *Dryops* have hitherto been referred, was based by Erichsen on an error of observation, he having supposed that in *Dryops* the hind coxæ are approximate, while in *Helichus* he stated correctly that they are distant. Examination proves, however, that they are as widely separated in *Dryops* as in the latter genus; and as no other character has, so far as I am aware, been mentioned to separate the two supposed genera, and I quite fail to find any myself, I propose that the name *Helichus* should be reduced to a synonym.

The genus *Dryops* consists of a single European and several North-American species, and includes also one from Java. The New-world species are difficult to study, on account of their being generally covered with a stony incrustation deposited on them from the waters in which they live; they appear, moreover, to be very variable according to locality, so that much difference of opinion is likely to prevail as to whether the forms found in different localities are specifically distinct. According to Dr. Horn these insects may be found in immense numbers; he states, indeed, *l. c.*, that he has seen several hundred specimens on a stone not more than four inches square. It would be well for the North-American entomologists to make an examination of the amount of variation exhibited in some one locality; for such an investigation is necessary before we can know what to treat as "species" in a genus like *Dryops*. Only comparatively scanty material in this genus has been obtained from Mexico and the other portions of Central America; and feeling it to be unadvisable to propose new species in it without very good grounds, I have referred certain forms to North-American species, entertaining, however, no strong opinion as to whether or not they may ultimately prove to be distinct.

1. **Dryops productus.**

Helichus productus, Lec. Proc. Ac. Phil. 1852, p. 43 [1]; Horn, Trans. Am. Ent. Soc. 1870, p. 32 [2].

Hab. North America, California [1] and Arizona [2]; Mexico, Oaxaca (*Höge & Sallé*), Guanajuato (*Sallé*).

The series of about twenty individuals found by Höge at Oaxaca shows scarcely any variation; and I cannot detect amongst them any trace of the differences in the form of the thorax said by Horn [2] to be exhibited by the sexes. From other sources there are only three or four specimens; and of these, two from Guanajuato form a well-marked variety of more elongate form, with more largely developed legs and diminished punctuation on the thorax. These two individuals approach more nearly to the Californian individuals in my collection than do the Oaxacan specimens; but they do not agree entirely therewith, though the differences are not of great importance. Whether these different forms are species, subspecies, or races, can only be determined by the examination of good series of specimens, aided by exact observations of locality. M. Sallé had regarded the few individuals in his collection as representing three distinct species.

2. **Dryops puncticollis.**

Elongatus, convexus, niger, subtus indumento griseo vestitus, abdominis segmento ultimo nudo, dense punctato; prothorace in medio densissime fortiter punctato, versus latera granulato; elytris opacis, versus latera granulatis, ibidemque indumento sordido vestitis, interstitiis tribus prope suturam subnudis.

Long. $3\frac{1}{2}$, lat. $1\frac{1}{2}$ lin.

Hab. MEXICO, Oaxaca (*Sallé*).

This insect is very similar to *D. productus*, but belongs to the group of the genus having the terminal ventral segment bare. It is readily distinguished from all the others known, by the very coarse and dense punctuation of the thorax, and from all except *D. productus* by the superior size. The legs are long and stout, very rough, and the tarsi are pitchy black in colour.

A single badly preserved individual is the only one I have seen.

3. **Dryops fastigiatus.**

Parnus fastigiatus, Say, Long's Exp. ii. p. 275 [1].
Helichus basalis, Lec. Proc. Ac. Phil. 1852, p. 43 [2].
Helichus fastigiatus, Horn, Tr. Am. Ent. Soc. 1870, p. 33 [3].

Hab. NORTH AMERICA [1 2], from Canada to Columbia and Illinois [3].—MEXICO, San Juan Coscomatepec (*Sallé*).

A single individual in very bad condition is the only evidence yet extant of the occurrence of the species in Mexico. Although this example appears to exhibit all the characters mentioned by Horn [3] as characteristic of Say's species, yet it would be satisfactory to examine better-preserved individuals before deciding whether the Mexican insect is really conspecific with that found in the United States.

4. **Dryops suturalis.**

Helichus suturalis, Lec. Proc. Ac. Phil. 1852, p. 43 [1]; Horn, Trans. Am. Ent. Soc. iv. p. 33 [2].

Hab. NORTH AMERICA [1 2].—MEXICO, Guanajuato (*Sallé*).

The exponents of this species before me from Mexico, as well as those from California, are so covered with strong incrustation that it is not possible to obtain an exact idea of their sculpture; but they appear to be conspecific. Horn informs us [2] that Leconte described three individuals of this insect as distinct species; so that it would appear that the species is a variable one.

5. **Dryops elmoides.** (Tab. IV. fig. 5.)

Suboblongus, parum elongatus, supra opacus, fusco-ferrugineus, subtus luteus, prosterno et metasterno in medio abdominisque segmento ultimo ferrugineis; corpore ubique æqualiter subtiliterque granulato; elytris seriebus punctorum subobsoletorum.

Long. $1\frac{1}{2}$, lat. $\frac{3}{4}$ lin.

Hab. GUATEMALA, Mirandilla 1700 feet (*Champion*).

Thorax considerably shorter than broad, gently curved at the sides, but not sinuate; hind angles rectangular, not produced backwards; the surface without punctuation, but evenly covered with fine granules. Elytra very dull, but without tomentum, covered with fine granules like the thorax, the sutural interstices not at all different in sculpture or clothing from the external ones. The series of punctures near the suture are rather indistinct, and externally are quite obsolete.

Although this insect has much the appearance of an *Elmis*, I am unable to detect, in the single exponent at my disposal, any character by which it may be distinguished from *Dryops*, with which it agrees in the structure of the sterna, of the antennæ, and of the front coxæ.

PELONOMUS.

Pelonomus, Erichson, Nat. Ins. Deutsch. iii. p. 510, note.

This is a very distinct genus, peculiar to the New World, where it extends from the Southern States of North America to Brazil, and includes the Antilles in its range. At present only five species belonging to it are known.

1. **Pelonomus obscurus.**

Pelonomus obscurus, Lec. Proc. Ac. Phil. 1852, p. 42[1]; Horn, Trans. Am. Ent. Soc. 1870, p. 31[2].

Hab. North America[1], Southern and Western States[2].—Mexico, Cordova (*Sallé*); Guatemala, Champerico (*Champion*).

Although this species is widely distributed, it is apparently rare, and I have been able to examine but few individuals. The four specimens from Cordova show that the species displays some important sexual differences, the penultimate joint of the maxillary palpus being in the male so elongate as nearly to equal in length the terminal joint. The middle tibiæ in this sex are strongly incurved at the extremity, and the third and fourth ventral segments much abbreviated in the middle, the terminal segment being correspondingly increased in size; in the female the penultimate joint of the palpus is so much shorter that it is only about one fourth the length of the terminal joint.

2. **Pelonomus palpalis.**

Oblongus, elongatus, nigro-fuscus, dense subtiliter punctatus, pube parum elongata vestitus; pedibus sat robustis, tibiis et tarsis ferrugineis; palparum maxillarium articulo ultimo quam penultimus duplo longiore. Long. $2\frac{3}{4}$, lat. $1\frac{1}{8}$ lin.

Hab. Panama, David (*Champion*).

I have seen but two individuals of this species, and am uncertain as to their sex; but as they agree with neither the male nor the female of *P. obscurus*, it is clear they are a different species. The maxillary palpi are of about the same length as they are

in the female of *P. obscurus*; but the relative proportion of the joints is different, the terminal joint being, as in the male of *P. obscurus*, not more than twice the length of the penultimate. In other respects the species is extremely similar to *P. obscurus*: the legs, however, are shorter and stouter; the posterior tarsi, on the other hand, are considerably longer, and nearly equal the tibiæ in length.

PARNUS.

Parnus, Fabricius, Syst. Ent. i. p. 245; Er. Nat. Ins. Deutsch. ii. p. 510.
Dryops, Oliv. Enc. Meth. Ins. vi. p. 297.

This genus comprises about sixteen species, all except one inhabiting the Mediterranean region, the exception being a South-American insect; other undescribed species, however, exist in Tropical America. These New-world species all have the second joint of the antenna much less developed than is the case with the European species; the club, moreover, consists distinctly of nine joints, while in the Old-world representatives of the genus only seven or eight can be distinguished. The Central-American insects here described agree in the above-named respects with the series of South-American species alluded to by Erichson (*op. cit.* p. 512); the differences, however, cannot at present be considered of generic importance, especially as some authorities (*cf.* Rey in Muls. Hist. Nat. Col. Fr., Diversicornes, p. 20) state that the antennal club in the European species is nine-jointed.

1. Parnus pusillus.

Elongato-ovalis, parum convexus, nigro-fuscus, subopacus, pube fusca brevissima dense vestitus setulisque sat elongatis erectis; pedibus piceis; elytris parce et parum fortiter punctatis.
Long. $1\frac{3}{4}$, lat. $\frac{3}{4}$ millim.

Hab. Guatemala, Chacoj, Rio Maria Linda 500 feet, Pantaleon 1700 feet, Rio Naranjo 450 feet, San Gerónimo, Paso Antonio (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba (*Champion*).

Var. Paulo angustior et magis elongata, antennarum articulo secundo extus minus acuminato.

Hab. Mexico, Cordova (*Sallé*).

A small obscure species, densely clothed with tomentum, by which it is rendered dull, and with moderately numerous upright hairs, and with a distant, rather fine, and not deep punctuation on the thorax and elytra. The auricular (or second) joint of the antennæ, though much less developed than in the European species, has still a considerable prolongation externally. The space separating the antennæ at their insertion is very small, quite as small as in the European *P. prolifericornis*.

A very large series of this species has been obtained, and the variation exhibited by the individuals is very slight. I can find no trace of external sexual characters amongst

fifteen individuals submitted to special examination for the purpose of detecting some sexual distinction.

The occurrence of the species in Mexico is open to doubt, as the single individual on which the record is based does not quite accord with the specimens from Guatemala; but it is so extremely similar that it could not be treated as a distinct species without evidence of its slight distinguishing characters being constant.

2. **Parnus mexicanus.**

Elongato-ovalis, parum convexus, niger, subopacus, pube fusca brevissima setulisque elongatis erectis vestitus; pedibus piceis; elytris parce sat fortiter punctatis.

Long. $1\frac{7}{8}$, lat. $\frac{7}{8}$ lin.

Mas tarsis anterioribus subtus serratis, articulo tertio acuto, quarto sat longe dentato, quinto in medio emarginato.

Hab. MEXICO, Jalapa (*Höge*), Cordova (*Sallé*).

This species is extremely similar to *P. pusillus*; but it has the second joint of the antenna only very slightly produced externally, and the erect hairs of the upper surface are a little longer, and the punctuation slightly more distinct.

Of the six individuals before me, five are males—that is, if I am correct in regarding the peculiar structure of the front tarsi as indicative of that sex.

3. **Parnus punctipennis.**

Elongato-ovalis, parum convexus, niger, pube fusca brevissima parum dense vestitus cumque setulis erectis elongatis; pedibus piceis; elytris fortiter et irregulariter punctatis, punctatura ad apicem obsoleta.

Long. $2\frac{1}{8}$, lat. $\frac{7}{8}$ lin.

Hab. GUATEMALA; PANAMA, Bugaba 800 to 1500 feet (*Champion*).

This species, again, is very closely allied to *P. pusillus*; but its individuals are of larger stature, and have a coarser punctuation on the elytra, and the second joint of the antenna is extremely little-produced externally. I have only four individuals before me; and one of them has all the tarsi fringed beneath with long pallid hairs, most conspicuous on the posterior feet: this may probably prove to be a character of the male.

4. **Parnus detritus.**

Elongato-ovalis, parum convexus, niger, sat nitidus, setulis erectis dense vestitus, in elytris fere absque pube tenuissima, pedibus rufis; elytris versus basin sparsim, haud fortiter punctatis.

Long. $1\frac{5}{8}$, lat. $\frac{3}{4}$ lin.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species differs from *P. pusillus*, to which, however, it is extremely similar, by the fact that the very fine clothing of the elytra is so much reduced that the elytra are shining, the upright longer pubescence remaining well developed. The thorax is rather more closely and coarsely punctate than are the wing-cases; these latter, how-

ever, have a quite distinct though distant punctuation on their basal portion, while beyond the middle they are nearly free from sculpture. The auricular joint of the antenna is small, and is but slightly produced outwardly, as in *P. punctipennis*; the first and second joints are of obscure red colour, the club being yellow.

I see no sexual character in the two individuals before me.

ELMOPARNUS.

Antennæ brevissimæ, latæ, in fronte perapproximatæ, 9-articulatæ, articulo basali fere occulto, secundo valde transverso, simplici. Palpi maxillares breves, articulo penultimo brevissimo, ultimo acuminato quam penultimus sexies longiore. Caput receptum. Corpus supra nudum nitidum; caput corpusque subtus utrinque pube brevissima vestita; prothorax basi utrinque stria sat elongata.

This genus is established for a minute insect having the appearance of an *Elmis*, but allied rather to *Parnus*, with which genus, indeed, it agrees in most particulars except those above detailed. The head at rest is quite received into the thorax, which is furnished with a chin-piece separated in front from the sides by a deep and broad fissure. The front and middle coxæ are very widely separated, while the hind coxæ are but little distant from one another. The peculiar antennæ are very broad and short, and the number of their joints difficult to decide on. The rather long and slender legs are similar to those of *Parnus*.

1. **Elmoparnus brevicornis.**

Oblongo-ovalis, parum elongatus, piceus, nitidus; antennis pedibusque rufo-testaceis; prothorace leviter transverso, antrorsum parum angustato, angulis anticis valde prolongatis, peracutis, basi utrinque striola impressa sat elongata; elytris cum prothorace irregulariter sparsim sat fortiter punctatis.

Long. $1\frac{1}{4}$, lat. $\frac{5}{8}$ lin.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Head clothed with dense fine tomentum as in the genus *Parnus*, the rest of the upper surface shining and quite free from clothing. The extreme base of the thorax is free from punctuation; but the rest of the surface is sparingly and coarsely punctate. The punctuation of the elytra is rather less scanty than that of the thorax.

The species is readily distinguished from all the others of the subfamily by the fact that the head, densely covered with tomentum, forms a remarkable contrast to the bare and shining prothorax and elytra. Only a single individual has been found: it has the apical ventral segment very large and shining; and its peculiarity in these respects induces me to think it is a male.

BYRRHOMORPHUS.

Corpus ovale, sat convexum, pube haud omnino brevi dense vestitum. Antennæ parum elongatæ, 11-articulatæ, articulo basali elongato, secundo subquadrato, simplici, ceteris versus apicem gradatim latioribus, brevibus. Palpi articulo ultimo valde dilatato. Pedes anteriores et intermedii perdistantes; coxæ anteriores transversæ, longissimæ; femora haud elongata.

This is a very peculiar form of Parnidæ, being intermediate in appearance between the members of that family and those of the Byrrhidæ, and really closely connecting the two families by many of its characters. It is, however, clearly related to the Potamophilini, and should form one of the genera of that very distinct group of the Parnidæ. The clothing of the upper surface consists of very fine, short, erect or only subdepressed hairs; and the under surface has a very dense short pubescence of such a character as is commonly found in Byrrhidæ, in *Morychus* for example. The antennæ are widely distant at their insertion, and but little different from those of *Potamophilus*, the basal joint, however, being more elongate and joints 3–11 more simple. The head is flexible, and can be much withdrawn within the prothorax; but when this is the case the trophi are still exposed. The prosternum has no distinct chin-piece; nevertheless it projects quite as far forwards, or even a little further than does the pronotum, and is somewhat deflexed in front to enlarge the opening for the head; the sides are peculiarly formed, being divided by a diagonal line, and the portion behind this line hollowed for the accommodation of the front legs. The anterior coxæ are very deeply imbedded and excessively elongate, and possess a large trochanter; they are placed far from the front of the prosternum. The mesosternum is very visible, and so much advanced in front that it is placed under the prosternum; it is very intimately connected with the prosternum by possessing a large depression into which is fitted, in the most accurate manner, a large prosternal process. The suture in the middle between the meso- and metasternum is obliterated. The epipleuræ are suddenly and abruptly narrowed at the level of the hind coxæ; these latter are very transverse, and scarcely longer (interpreting that word as referring to the longitudinal direction of the body) internally than externally; they are separated by an elongate, moderately broad projection from the first ventral segment. The legs are of the Parnid type, without spurs; the tarsi 5-jointed, the four basal joints being short and subequal, the fifth equalling the whole four in length. The ventral segments are five in number, the second not quite equal in length to the third and fourth together.

In any discussion of the relation between the families Byrrhidæ and Parnidæ this insect must play an important part.

1. **Byrrhomorphus vestitus.**

Ovalis, sat convexus, niger, supra pube brevi fusca dense vestitus, æqualiter subtiliter sat dense punctatus, antennarum basi sordide testacea, pedibus piceis; subtus pube grisea brevi densissime vestitus.

Long. $2\frac{1}{8}$, lat. $1\frac{3}{8}$ lin.

Hab. GUATEMALA, Panima (*Champion*).

Antennæ scarcely longer than the breadth of the head at vertex; the fourth to eleventh joints together about as long as the first three together; third joint small, obconical, the following joints closely applied to one another, each a little broader than its predecessor, so that the tenth is very distinctly transverse. Thorax much

narrowed to the front, the sides obliquely straight, the base in the middle strongly lobed, the lobe nearly truncate behind. Elytra depressed at the humeral angle.

Only a single individual, in very fragile condition, has been obtained.

DISERSUS.

Corpus elongatum, pube brevissima dense vestitum. Labrum latissimum, latius clypeo; antennæ ad basin distantes, 11-articulatæ, articulo basali elongato, secundo simplici, haud transverso, 3°–11^{m} subæqualibus, intus perparum productis. Coxæ anteriores maxime distantes; prosternum ante coxas brevissimum, fere nullum. Coxæ intermediæ valde distantes; mesosternum a metasterno sutura profunda disjunctum, medio impressione magna prosterni processum recipiente. Pedes elongati, femoribus anterioribus præsertim elongatis, tibiis compressis.

The insects for which I propose this name are allied to the European *Potamophilus*, but differ in so many respects that they cannot be placed in the same genus therewith. The extreme separation of the front and middle coxæ is most remarkable, as is also the elongation of the anterior femora; the impression on the mesosternum is broad and definite, and becomes narrower behind, in conformity with the shape of the prosternal process, whereas in *Potamophilus* the impression is indefinite and quite narrow in front, becoming broader behind and reaching the metasternal suture.

In addition to *Disersus longipennis*, the genus will comprise the Colombian *Potamophilus goudotii*, Guér.

1. **Disersus longipennis.** (Tab. IV. fig. 6.)

Elongatus, niger, opacus, supra pube concolori brevissima vestitus, subtus pube densissima cinerea; antennarum basi testacea; elytris striatis, apicibus sinuatis et prolongatis.

Long. 4, lat. 1½ lin.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Thorax strongly transverse, much narrowed in front in a gentle curve; the base much prolonged in the middle, and the prolongation deeply emarginate behind; on each side of this basal lobe there is a minute impression; but the rest of the surface is even. The remarkably elongate elytra are marked by regular very shallow striæ, which are very distinctly though not coarsely punctate.

Only two individuals have been found; in one of them the prolongations at the apex of the wing-cases are more slender than in the other. Although this is the only difference I perceive, I believe it indicates the sexes, the specimen with slender prolongations being the male.

HEXANCHORUS.

Corpus suboblongum, capite angustulo, oculis vix prominulis, prothorace elytris angustiore, pube brevissima dense vestitum. Antennæ distantes, 11-articulatæ, articulo basali elongato, 2° simplice, 3°–11^{m} subsimilibus, simplicibus, intus subserratis. Pedes elongati, graciles, tibiis intermediis et posterioribus subcompressis. Coxæ anteriores late distantes; prosternum in processu magno, triangulari productum; coxæ intermediæ perdistantes, mesosternum parum impressum, a metasterno sutura profunda disjunctum.

The insect for which I propose this genus is allied to *Potamophilus*, but differs in so many points of its structure that I am obliged to isolate it. The head is free, and, though the mouth can be much bent inwards, is not retractile; the labrum is as broad as the clypeus, and its membranous or ciliate border quite small; the apical joint of the maxillary palpus is so closely connected with the preceding joint that the two appear to form only a single large joint. The front coxæ are but little elongate externally, are placed close to the front of the prosternum, and widely separated. The middle coxæ are more widely separated than the front ones; and the mesosternum between them is marked only with an indefinite depression for the reception of the very broad prosternal process. The hind coxæ are also very broadly separated.

The insect is more nearly allied to the European *Potamophilus* than to *Disersus*, and should be placed between the former genus and *Phanocerus*. The articulation between the prothorax and afterbody appears to admit of greater motion than in the allied forms.

1. **Hexanchorus gracilipes.** (Tab. IV. fig. 7.)

Suboblongus, opacus, niger, supra pube fusca, subtus pube brevissima cinereo-micante vestitus, antennarum pedumque basibus flavis; prothorace antrorsum angustato, pone apicem transversim constricto, ad angulos posticos impresso; elytris subtiliter striatis, striis ad basin punctatis.

Long. $1\frac{7}{8}$, lat. $\frac{5}{8}$ lin.

Hab. Mexico, Chinantla (*Sallé*).

This species is very readily identified by the profound depression extending across the thorax a little behind the front margin. The lobe formed at the base of the thorax in front of the scutellum is very short. No punctuation can be seen on the surface of the prothorax.

The male has the basal ventral segments depressed in the middle, the apical segment emarginate at the extremity, and the legs apparently longer than in the female; in the latter sex the apices of the elytra are a little prolonged.

The species was labelled *Potamophilus flavicornis*, Chevr., in the Sallé collection, and also in an old French collection in my possession; but as that name is not an applicable one, I have not used it. The few specimens examined show much variation in the sculpture of the elytra and the form of their apices; but I am not able to detect any good specific distinctions.

PHANOCERUS.

Corpus suboblongum, parum elongatum, pube brevi densissime vestitum. Antennæ distantes, 11-articulatæ, articulo basali elongato, secundo simplici, magno, tribus sequentibus minutis, ceteris clavam compactam ovalem formantibus. Caput liberum. Coxæ anteriores parum distantes, intermediæ late distantes. Prosternum in processu gracili elongato productum. Pedes sat elongati, tibiis simplicibus haud compressis.

This genus is allied to *Potamophilus*, but differs from it by the structure of the

antennæ, the last six joints of which are formed into a compact oval club this club is flattened or compressed, so that viewed in one direction it appears rather broad, but in the opposite direction looks slender. The prosternum is not provided with any well-marked chin-piece; nevertheless the front coxæ are not placed quite at its anterior edge, and are comparatively but little separated, the prosternum being produced between them into an elongate slender process, which is received into a rather large depression of the mesosternum; the latter in the middle is not separated by any distinct depression from the metasternum.

The genus should be placed after *Potamophilus* as the last of that group of genera. The Australian *Lutrochus australis*, King, is allied to it, and should probably be formed into an allied genus distinct from *Lutrochus*. This latter genus (from South America) has, according to Erichson, a similar structure of the antennæ, but in other respects it appears allied to *Byrrhomorphus* rather to *Phanocerus*.

1. **Phanocerus clavicornis.** (Tab. IV. fig. 8.)

Parum elongatus, fuscus, pube brevi depressa densissime vestitus; antennis pedibusque sordide testaceis, illarum clava fusca; prothorace elytris angustiore, antrorsum angustato, margine laterali parum distincto; elytris vix striatis, parum profunde seriatim punctatis.

Long. $1\frac{1}{8}$, lat. $\frac{1}{2}$ lin.

Hab. GUATEMALA, Coban (*Champion*).

Basal joints of antennæ with conspicuous, rather long pubescence. Eye very little prominent. Thorax at the base much narrower than the elytra, very convex transversely, with an indistinct curved impression marking off the basal portion of the side; punctuation quite invisible. Elytra covered with dense fine tomentum concealing their sculpture, which consists of rather indistinct striæ, marked with shallow rather large and distant punctures. Undersurface very densely clothed with a fine pale pile.

The series of half-a-dozen individuals shows no sexual distinction; all have the apices of the elytra quite simple.

Subfam. *ELMINI.*

CYLLŒPUS.

Cyllœpus, Erichson, Ins. Deutsch. iii. p. 521 (note).

This genus was established for a Peruvian species which has hitherto remained without congener.

1. **Cyllœpus optatus.** (Tab. IV. fig. 9.)

Elongatus, subparallelus, niger, opacus, antennarum basi sordide rufa; prothorace elongato, canaliculato,

utrinque linea elevata; elytris fortiter punctatis, versusque latera lineis duabus elevatis, interstitio secundo ad basin elevato.

Long. $1\frac{3}{4}$, lat. $\frac{5}{8}$ lin.

Hab. GUATEMALA, Rio Naranjo, 450 feet (*Champion*).

Antennæ short, the two basal joints obscure red, the rest black; the four apical joints distinctly incrassate. Thorax longer than broad, a good deal narrower than the elytra; its greatest breadth about two thirds of the length from the front, behind this slightly narrowed to the base, and also slightly narrowed towards the front; the surface closely granulate-punctate, with a channel along the middle which is very deep on the disk, but does not extend to the front margin; at the base on each side of this channel is a short longitudinal impression, while near the side there is a raised line extending the whole length, though indistinct at the front margin. Elytra with series of very large punctures, and with the second interstice at the base elevated; the fourth and sixth interstices provided each with a raised line not extending to the apex. Legs elongate; metasternum granulate.

Only a single specimen has been obtained of this species; it has the basal ventral segment very deeply impressed, and the apical segment not emarginate at the hind margin.

HETERELMIS.

Genus quoad faciem *Elmidi* Europæo persimile. Palpi maxillares articulo ultimo dilatato, haud longiore quam latiore, apice truncato. Prosterni processus apice truncato lato. Mesosterni fossula lata, haud profunda, lateribus omnino parallelis.

The obscure insects forming this genus are excessively similar to the European *Elmis*; but they do not agree with them in the structure of the maxillary palpi, nor in that of the mesosternum, and must be isolated from all the forms included in *Elmis* by Erichson and recently separated into several genera by Mulsant and Rey. The species of *Heterelmis* possess two fine elevated crenate lines on the wing-cases parallel to the outer margin, and also an elevated line on each side of the thorax; the lateral margin of the thorax is very sharply defined and rather obscurely crenate. The maxillary palpi are so distinct in their structure as to be of themselves sufficient to validate the genus: they are very short, so that they do not extend beyond the lobes of the maxillæ; the basal joint, as usual, is minute and concealed; the second joint, slender at the base, is very short, but becomes abruptly broader so as to be transverse at the apex; the third joint is very short and strongly transverse; the fourth broad, subquadrate, but distinctly longer outwardly than at its inner margin.

1. **Heterelmis obscurus.**

Niger, subopacus, antennis rufis, pedibus piceis; prothorace elytris angustiore, dorso in medio sulculo transverso impresso; elytris seriatim punctatis.

Long. 1, lat. $\frac{1}{2}$ lin.

Hab. GUATEMALA, Guatemala city 5000 feet, San Joaquin in Vera Paz (*Champion*).

This species is readily distinguished from its congeners by the deep transverse furrow placed just on the middle of the length of the thorax, between its two elevated lines. The punctures forming the series on the elytra are not very distinct, and have but little appearance of being connected so as to form striæ; the pubescence is scanty; the basal ventral segment is rather closely punctate in the middle; but the following segments are almost impunctate; the transverse carina between meso- and metasternum is very strongly elevated. The legs are more elongate than in the allies of the species.

2. **Heterelmis obesus.** (Tab. IV. fig. 10.)

Latus, niger, opacus, antennis rufis, pedibus nigro-piceis, tarsis rufis; prothorace elytris angustiore, dorso in medio vix transversim depresso; elytris seriatim punctatis.
Long. $1\frac{1}{8}$, lat. $\frac{9}{16}$ lin.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

An insect of short broad form. The thorax is much narrowed towards the front, and is dull, closely but very indistinctly punctate; external to the raised lines there are fine granules, and across the middle there is an obsolete transverse impression. The punctures on the elytra are quite distinct at the base, but much more obsolete at the apex, and they give rise to a slight appearance of striation. The basal and following ventral segments are rather finely punctate along the middle.

Although very closely allied to *H. obscurus*, this is apparently constantly distinct: the form is broader, the antennæ longer, the legs shorter, the thorax with only indefinite impression across the middle; the extremity of the prosternal process is broader, and the middle of the metasternum and ventral segments more punctate.

3. **Heterelmis simplex.**

Brevis, niger, subopacus, antennis pedibusque rufis; prothorace elytris angustiore, æquali; elytris seriatim punctatis.
Long. $\frac{7}{8}$, lat. $\frac{1}{2}$ lin.

Hab. GUATEMALA, Cahabon (*Champion*).

Thorax only very indistinctly and sparingly punctured and pubescent, a little shining. Elytra with series of fine punctures, and at the extreme base appearing a little striate. Middle of metasternum and ventral segments almost impunctate along the middle.

Extremely closely allied to *H. obscurus* and *obesus*, but differing from the former by the absence of the prothoracic groove, by its more feeble legs and its shorter form; while from *H. obesus* the smaller size and the less punctate under surface readily separate it. I have seen only three individuals, one of which has the legs pitchy red.

ELSIANUS.

Corpus robustum, suboblongum. Palpi maxillares articulo ultimo dilatato. Prosterni processus apice rotundato. Mesosterni fossula fere ad metasternum prolongata. Scutellum latum, suborbiculatum.

Although this genus approximates to *Heterelmis* in many points, it appears quite distinct in various particulars of structure as well as in appearance. The head is broad, with the eyes convex. The thorax with largely developed lateral margin, with a fine line or impression running parallel with it. The elytra without raised lines. The maxillary palpi are rather largely developed; the second joint short, about as long as broad at the extremity; the third joint shorter and broader, not so long as broad, the terminal joint remarkably large, being broader than the preceding joint, but longer than broad; the extremity truncate. The prosternal process is not or only indistinctly margined, and is not truncate at the extremity, but distinctly longer in the middle than it is at the sides. The mesosternal groove is broad, and in front is limited by two raised parallel lines; but it is continued backwards behind these lines as a depression of the surface, and nearly attains the metasternum. This latter is even, without raised lines. The hind coxæ are very widely separated; but there are no raised lines on the first ventral segment.

The form of the apex of the prosternal process, and the more elongate maxillary palpi, independent of other characters, are sufficient to differentiate the genus from *Heterelmis*. I believe the body is destitute of the fine pubescence usually found in the Elmini; but the condition of the few specimens at my disposal does not allow me to feel certain as to this.

1. **Elsianus robustus.** (Tab. IV. fig. 11.)

Suboblongus, nigro-fuscus, subopacus, antennis pedibusque rufis; elytris striatis, corpore superne subtiliter, fere æqualiter granulato.

Long. $1\frac{3}{4}$, lat. $\frac{3}{4}$ lin.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

Thorax scarcely narrower than the elytra; the sides slightly curved, the front emarginate on each side over the eyes, and thus appearing lobed in the middle; the surface not punctate, but evenly covered with distinct raised granules; the lateral margin is coarse, and behind projects a little backwards, thus rendering the hind angles minutely acute; parallel with the side is a line or impression, similar rather to what exists in *Parnus*, than to the more definite carina of the Elmini. The elytra are marked with five or six regular striæ, extending from base to apex; but the portion external to these striæ is only very indistinctly striate; at the base the second stria diverges outwards, and there is a short stria placed between it and the first; the striæ are indistinctly punctate, and the interstices are strewn with fine raised granules. The under surface is coarsely and evenly granulate.

2. **Elsianus striatus.**

Suboblongus, nigro-fuscus, subopacus, antennis pedibusque rufis; prothorace lateribus rotundatis; elytris striatis; corpore superne subtiliter, fere æqualiter granulato.

Long. $1\frac{7}{8}$, lat. $\frac{3}{4}$ lin.

Hab. Guatemala, Rio Naranjo 450 feet (*Champion*).

So far as I can judge from a single individual, this is a species extremely similar to *E. robustus*, but distinguished by some slight structural differences—the prosternal process being less broad, not quite flat, but with an obsolete raised margin, and the terminal portion of the mesosternal fossa so much narrower that it forms merely a narrow, rather deep, fovea. On the upper surface the only definite distinction to be seen is that the thorax is more rounded at the sides, and thus appears to be quite distinctly narrowed in front of the hind angles; other slight differences may be merely individual peculiarities.

3. **Elsianus graniger.**

Suboblongus, fere angustulus, nigro-fuscus, subopacus, antennis rufis, pedibus rufo-obscuris; prothorace elongato, lateribus rotundatis, angulis posterioribus acutis; elytris fortiter striatis; corpore superne confertim granulato.

Long. 2, lat. vix $\frac{3}{4}$ lin.

Hab. Costa Rica, Cache (*Rogers*).

The single specimen before me of this insect, although very similar to *E. robustus*, is undoubtedly a very distinct species, possessing important structural characters of its own. It is less parallel in form. The thorax is quite as long as broad; it is much rounded at the sides, so that it is a good deal contracted behind; and the hind angles project distinctly backwards; the elevated line on the thorax is deep and definite at the base, but is altogether wanting in front; the surface is closely granulate; and there appears to be a very small prominence in front of the scutellum. The elytra are narrower at the base than they are behind; they are deeply striate; the striæ bear coarse punctures; and the surface is rendered very rough by dense granulations. The maxillary palpi are much shorter than in *E. robustus*, the terminal joint being broader than long. The prosternal process is rather narrow; and the large, elongate, rather narrow mesosternal fossa is remarkably deep and definite through its whole length.

Although this insect approximates to *Heterelmis* by the structure of the maxillary palpi, yet, by the structure of the mesosternal fossa and prosternal process, it departs more widely from that genus than do the other two species of *Elsianus*.

ELMIS.

Elmis, Latreille, Hist. Nat. d. Fourm. p. 396 [1].
Limnius, Er. Nat. Ins. Deutsch. iii. p. 522 [2].

This is a genus as to whose limits considerable diversity of opinion prevails. Erichson [2] separated *Limnius* on account of a difference in the scutellum and base of the thorax and some other slight characters; and Duval separated *Lareynia* (included in *Elmis* by Erichson) on account of a difference in the maxillary palpi. On the other

hand, Leconte and Horn have rejected *Limnius* as not distinct from *Elmis* by sufficiently important characters; and the Munich Catalogue of Coleoptera suppresses *Lareynia*, while admitting *Limnius*. More recently, Mulsant and Rey (Hist. Nat. Col. Fr., Uncifères) have divided the European species of *Elmis* into six genera; while, again, King (Trans. Ent. Soc. N. S. Wales, 1865) has described from Australia, under the generic names *Elmis* and *Limnius*, certain species which would clearly have to be separated from the European genera so named if we presumed, as King has done, the characters by which the two genera just named are separated to be valid. A comparison of the Central-American insects with the European forms reveals considerable differences; but great diversity of structure among the former is also seen, and it would, I believe, be the proper course to make several new genera for these Central-American *Elmides*: this task the material before me, consisting largely of unique individuals, renders almost impossible; and in view of all the facts I have decided on using the generic name *Elmis* in the more extended sense suggested by Leconte and Horn, a course which will at any rate possess the advantage of placing the Central-American and North-American species on a similar footing. I have, however, separated certain forms which could not be included in *Elmis* without rendering invalid other genera that are still adopted, such as *Stenelmis* and *Cyllœpus*. In this extended sense *Elmis* will comprise at present about fifty species, of which more than half are European, fifteen North-American, a few Australian, two being from Chili and Peru. The species of the southern portions of the United States have been but little collected, and none are known from Mexico; but no doubt both these regions will in due course furnish a fair contingent of species. The insects of this genus live, without exception, on stones in running waters; and now that Mr. Champion has discovered so many species in Central America, we may anticipate that the waters of the hilly regions of the tropics will, when searched for the purpose, yield a considerable fauna of these insects.

1. **Elmis championi.** (Tab. IV. fig. 12.)

Elongatus, angustulus, anterius angustatus, nigro-fuscus, opacus, antennis pedibusque rufis; prothorace utrinque linea elevata arguta; elytris vix striatis, sed fortiter seriatim punctatis, punctis versus apicem obsoletis, interstitiis granulatis, utrinque versus latus linea elevata a basi ad apicem ducta.

Long. $1\frac{1}{4}$, lat. $\frac{5}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Rather narrow, little convex, elongate, and thus similar in form to the European *Elmis angustatus*. Antennæ rather elongate, clear red. Thorax very opaque, but without granulation or punctuation; the sides narrowed in front, the lateral margin coarse, crenulate, the hind angles a little raised, so that there appears to be a depression in front of them; on each side a very conspicuous elevated line that becomes obsolete at the front margin. Elytra with rows of coarse punctures that become quite obsolete on the apical portion, also rather finely granulate, and with a fine but very definite elevated line extending from the shoulder to the extremity.

A single individual only has been obtained of this species: it resembles somewhat in sculpture the species of *Elsianus*; but the maxillary palpi are slender, the metasternum is coarsely granulate, and the basal ventral segment has an impression on the middle, limited by an elevation that is most marked behind, and that thus has somewhat the appearance of an obscure tuberculiform elevation at the first suture.

2. **Elmis sculptipennis.**

Elongatus, angustulus, nigro-fuscus, opacus, antennis pedibusque rufis; prothorace utrinque linea elevata, ad basin juxta hanc lineam impresso, basique in medio sulcato; elytris fortiter seriatim punctatis, parum distincte granulatis, utrinque versus latus linea elevata a basi ad apicem ducta.

Long. 1, lat. vix $\frac{1}{2}$ lin.

Hab. GUATEMALA, Rio Naranjo 450 feet (*Champion*).

Thorax elongate, very gently rounded at the sides, and only very slightly narrowed near the hind angles; parallel with the side there is a raised line extending the whole length, and the surface at the base close to the inner side of this line is more deeply impressed; at the base there is a central longitudinal channel extending forwards for about half the length of the thorax, where it meets a very obsolete transverse depression. Elytra with series of very coarse punctures, the inner of which become obsolete towards the apex, and with a fine, very definite elevated line, extending from the shoulder to the extremity. Metasternum very coarsely granulate; basal ventral segment very deeply impressed on the middle.

Only a single, rather immature individual has been found. It seems rather closely allied to *E. championi*; but the smaller size and the existence of a central channel on the thorax readily distinguish it.

3. **Elmis heteroceros.** (Tab. IV. fig. 13.)

Parum elongatus, convexus, nigro-fuscus, subopacus, antennis pedibusque rufis, illis apice fuscis; prothorace convexo, elytris angustiore, inæquali, dorso longitudinaliter late depresso, utrinque versus latus ad basin linea crassa elevata; elytris granulatis, substriatis, striis sat fortiter punctatis, versus latus utrinque lineis duabus elevatis, interstitioque secundo ad basin elevato.

Long. $1\frac{3}{8}$, lat. $\frac{5}{8}$ lin.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

Var. Elytris ad basin et ante apicem plaga magna testacea.

Antennæ rather short and distinctly thickened at the apex, the four apical joints subserrate beneath, the two basal joints differing from the following ones, being a good deal stouter; the first is quite slender at the point of insertion, curved, and distinctly longer than the second, this latter suboblong, rather longer than thick. Eyes very convex. Thorax a good deal narrowed towards the front, but scarcely narrowed at the base, the sides much raised; parallel with each is a broad indefinite elevation, which does not reach the front margin; on the middle, in front of the scutellum, the surface is longitudinally slightly elevated; and in front of this there is a deep broad depression;

there is also on each side an oblique indefinite depression. The elytra have regular series of large punctures, of which those near the suture are finer; they are rough from numerous granulations, and towards the sides have two elongate carinæ, between and outside of which the sculpture is very deep and coarse. Under surface granulate; metasternum with a deep channel in the middle behind. Basal ventral segment not at all depressed in the middle, and with only the rudiment of an elevated line on each side.

This very distinct species approximates to *Elsianus* by the form of the prosternal process and mesosternal fossa; but it has the maxillary palpi quite slender, the terminal joint being twice or three times the length of the short third joint.

4. **Elmis granulosus.**

Parum elongatus, nigro-fuscus, opacus, antennis pedibusque rufis; prothorace parum elongato, lateribus leviter rotundatis, in medio longitudinaliter sulcato, utrinque linea elevata; elytris subtiliter seriatim punctatis, versus latera linea elevata subtiliter crenulata, externeque linea secunda minus elevata; corpore superne confertim subtiliter granuloso.

Long. $\frac{7}{8}$, lat. $\frac{3}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Var. Minor.

Hab. GUATEMALA, Paraiso 300 feet (*Champion*).

A small insect, resembling somewhat in form the European *E. nitens*. The elevated lines on the thorax become obsolete before reaching the front; the central channel is broad and distinct; and the surface is closely covered with fine very slightly elevated granulations. The elytra are only very indistinctly striate, and their rather fine series of punctures are indistinct at the extremity; along the fifth interstice is an elevated line looking as if it were formed of extremely fine tubercles, and between this and the outer margin there is a shorter and less distinct raised line. The metasternum is granulate, the basal ventral segment but little impressed in the middle, and the depression not limited by a raised line.

The only individual found at Panama has one of the antennæ malformed and exhibiting a deficient number of joints. The specimen from Paraiso is so immature and soft that it cannot be satisfactorily examined; and it is doubtful whether it be really conspecific with the Panama example.

5. **Elmis apicalis.** (Tab. IV. fig. 14.)

Elongatus, angustulus, depressus, fusco-ferrugineus, antennis pedibusque rufis; prothorace elongato, versus latus utrinque linea elevata, in medio profunde transversim depresso; elytris ad basin grosse punctatis, dimidio apicali fere lævigato, versus latus linea elevata a basi fere ad apicem ducta.

Long. $\frac{3}{4}$, lat. vix $\frac{3}{8}$ lin.

Hab. GUATEMALA, S. Joaquin in Vera Paz, Rio Naranjo 450 feet (*Champion*).

This little insect has much the form of the European *E. angustatus* and its allies,

but is very readily recognized by the very deep transverse impression extending across the middle of the thorax; the antennæ are elongate and slender; the middle of the thorax is quite free from sculpture, and rather shining, possessing only a very fine pubescence. The very coarse punctuation on the basal portion of the elytra is in remarkable contrast to the impunctate apical portion. The metasternum is impressed along the middle, and, like the middle of the basal ventral segment, is very finely coriaceous.

6. **Elmis inæqualis.**

Angustulus, niger; antennis rufis, articulo ultimo rufo-fusco; pedibus piceo-rufis, tarsis dilutioribus; prothorace elongato, elytris angustiore, inæquali, lateribus subbisinuatis, utrinque versus latus linea subtili elevata; elytris ad basin fere grosse punctatis, dimidio apicali fere impunctato, versus latus utrinque lineis duabus elevatis, quarum externa elongata.

Long. 1, lat. vix $\frac{1}{2}$ lin.

Hab. GUATEMALA, Guatemala city, San Joaquin in Vera Paz (*Champion*).

Antennæ rather elongate, red, the apical joint quite as long as the two preceding together, and rather darker in colour. Thorax longer than broad, scarcely narrowed to the front, the sides slightly bisinuate, the surface very uneven; parallel with each side is an elevated line, on the disk is a deep impression, and in front of the base on each side of the middle is a large rather indefinite oblique impression, and between the raised line and the side-margin there is towards the front a still more indefinite impression. The scutellum is rather large, but is longer than broad. The elytra are rather elongate and narrow; near the side of each is a strongly elevated line extending from the shoulder to near the extremity, and parallel with this, nearer the suture, a shorter line extending only about halfway to the apex; the basal portion bears some coarse deep punctures; but the apical half is nearly impunctate. Beneath the metasternum is uneven, owing to some large impressions. The maxillary palpi are rather slender; the third joint is subquadrate, about half the length of the fourth joint.

A large series, showing very little variation, has been obtained of this species.

7. **Elmis distortus.**

Elongatus, convexus, nigro-fuscus, antennis pedibusque elongatis, gracilibus; prothorace angusto, elongato, valde inæquali, ante medium subconstricto, utrinque linea elevata; elytris ad basin punctis sat magnis, ad apicem fere impunctatis, externe lineis duabus elevatis, quarum interna postice abbreviata.

Long. $\frac{7}{8}$, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, Cubilguitz (*Champion*).

Antennæ elongate and very slender, not at all thickened at the extremity. Thorax narrower than the elytra, very elongate, the sides very conspicuously crenulate, the surface very uneven, there being a large impression on the middle, and behind this, on each side, an obliquely curved impression, nearly joining its fellow at the middle; a fine elevated line runs on each side from base to apex and is sinuate about halfway.

Elytra with very abbreviate series of punctures, and with two raised lines, the inner of which, however, does not extend much more than halfway to the apex; the inner interstices are also obscurely elevated at the base. The legs are very long and slender, the tarsi being extremely elongate.

The species is described from a single individual that has been damaged in its capture, and which cannot be taken off the card on which it is mounted to examine its structure; but it appears to be a quite distinct species.

8. **Elmis nodipes.** (Tab. IV. fig. 15.)

Supra nigro-æneus, nitidus, subtus ferrugineus, antennis pedibusque testaceis, illarum articulo ultimo, harum geniculis fuscis; prothorace elongato-oblongo, in medio profunde transversim depresso; elytris thorace multo latioribus, sat fortiter seriatim punctatis, versus latus utrinque lineis duabus parum elevatis, interna breviore; pedibus perelongatis, femoribus in medio crassioribus.

Long. $\frac{3}{4}$, lat. vix $\frac{3}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

The antennæ are short; and the apical joint is broader than the others to such an extent as to give the appearance of a very small club. The thorax is remarkably elongate; it is not at all curved at the sides, but is slightly narrowed in front; across the middle there is a deep transverse depression, and at this point the thorax becomes conspicuously narrower; there is no elevated line parallel with the margin, but at the base on each side there is a depression, and the surface is obscurely binodose on the middle just behind the transverse depression; there is no punctuation; and the surface is shining, except that it bears a few fine hairs. The scutellum is small, and longer than broad. The elytra bear quite distinct series of punctures; and near the side there is an elevated line which is very fine at the base; and internal to this there is a shorter and broader, less sharply elevated line. The under surface is impunctate, the sides broadly clothed with tomentum, the metasternum with a deep channel in the middle at the extremity. The hind coxæ are excessively distant.

9. **Elmis longicollis.**

Supra nigro-æneus, nitidus, subtus ferrugineus, antennis (?) pedibusque testaceis, femoribus obscuratis; prothorace elongato-oblongo, in medio profunde transversim depresso; elytris thorace multo latioribus, subtiliter seriatim punctatis, versus latus utrinque linea valde elevata; pedibus elongatis, femoribus in medio crassioribus.

Long. $\frac{5}{8}$, lat. $\frac{1}{4}$ lin.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species is extremely similar in appearance to *E. nodipes*; but the basal portion of the thorax is simply convex, without any distinct elevation or depression, except a basal elevated plica in front of the scutellum; the series of punctures on the elytra are fine and the interstices absolutely flat, there being not the least appearance of striation;

and nearly parallel with the side is a very strongly elevated line extending from the shoulder to near the extremity.

Only a single individual has been found; it is in bad condition, and has lost its antennæ with the exception of the two basal joints, which are yellow.

10. **Elmis sulcicollis.** (Tab. IV. fig. 16.)

Late ovalis, convexus, niger, subnitidus, antennis rufis, pedibus vel piceis vel rufis; prothorace antrorsum angustato, versus latera utrinque linea arguta elevata, medio sulco parallelo, integro; elytris punctis paucis seriatis, parum conspicuis, utrinque versus latns lineis duabus elevatis, pliculaque basali inter lineam internam et scutellum.

Long. $\frac{3}{4}$, lat. $\frac{3}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ slender and elongate, not thickened at the apex, clear red. Head narrow, eyes not convex. Thorax much narrowed from the base to the apex, the sides very slightly curved, not in the least sinuate or crenate; completely parallel with the side is a very distinct raised line running from base to apex; and along the whole length of the middle there extends a very definite parallel-sided canal; the base in the middle is deeply notched in adaptation to the scutellum; the surface appears destitute of sculpture, but under a high magnifying-power exhibits a peculiar dense, fine porosity. Elytra broad and short, much curved at the sides, with obliterated series of distant punctures, with a very strongly raised line continuous with the thoracic raised line and extending to the extremity, and with a second raised line external to this, continuous at the base with the thoracic lateral margin, and extending very nearly to the extremity, before its termination it is joined by the raised lateral margin of the wing-case; halfway between the inner line and the scutellum there is at the base a strongly raised, quite short plica. Undersurface impunctate; prosternal process very broad, its side margin continued as a fine raised line to the front margin of the prosternum; the middle of the metasternum with a raised divergent line on either side, reaching to the hind coxæ; basal ventral segment not impressed, segments 1–4 very short, the fifth large, equal in length to the four preceding together.

In some individuals of the small series obtained of this species there is a minute projection on the inner edge of the hind tibia a little below the middle, and beyond this the face of the tibia is somewhat excised; these are probably males.

11. **Elmis curtulus.**

Late ovalis, brevis, convexus, niger, subnitidus, antennis pedibusque rufis; prothorace antrorsum fortiter angustato, versus latus utrinque linea arguta, elevata, medio sulco antice latiore; elytris punctis paucis seriatis, parum conspicuis, utrinque versus latus lineis duabus elevatis, pliculaque basali sat elongata inter lineam internam et scutellum.

Long. $\frac{5}{8}$, lat. $\frac{3}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This insect is closely allied to *E. sulcicollis*; but the channel on the middle of the thorax, instead of being quite parallel-sided, becomes rather broader from the base to the middle, and is limited on each side by a fine raised line; besides this *E. curtulus* is of shorter form and has the basal plica on the wing-case more elongate. Only a single specimen has been found.

12. **Elmis formosus.**

Ovalis, convexus, niger, subnitidus, antennis rufis, pedibus piceo-rufis; prothorace elongato, antrorsum angustato, versus latus utrinque linea arguta, elevata, medio sulco perfecto ad basin latiore; elytris impunctatis, utrinque versus latus lineis duabus elevatis.

Long. $\frac{3}{4}$, lat. $\frac{3}{8}$ lin.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

This species is closely allied to *E. sulcicollis*, but is of rather narrower form; the prothorax is more elongate, its lateral line is more strongly elevated at the base, and the remarkably perfect median channel is broader in front of the scutellum; the elytra are almost without any trace of punctuation, and have no basal plica between their inner carina and the scutellum.

Two individuals have been sent by Mr. Champion.

13. **Elmis bufo.**

Late ovalis, convexus, subopacus, niger, antennis tarsisque rufis; prothorace æquali, ad latera granulato; elytris subtiliter seriatim punctatis, versus latera lineis duabus subtiliter crenulatis.

Long. $\frac{7}{8}$, lat. fere $\frac{5}{8}$ lin.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ slender and rather short. Thorax broad, very convex, its lateral margin very fine and indistinct; the surface is dull and without punctuation; but there are towards the sides numerous fine granules; there is no trace of elevated lines or of depressions. The scutellum is remarkably broad. The elytra have rather obsolete series of punctures and are also finely granulate, more conspicuously at the sides and apex than on the disk; they possess two raised lines of fine crenulations, the outer of which does not connect with the lateral margin. The front coxæ are excessively distant; and so short and broad is the projection behind them that it can scarcely be called a prosternal process, and its sides do not extend forwards as raised lines; there are no raised lines between the middle and hind coxæ. The basal ventral segment is not at all impressed; and the apical segment is of normal size.

I have described the species from a unique and mutilated individual. The parts of the mouth appear to be unusually small, and I have quite failed to obtain any definite idea of the maxillary palpi; they have however, I think, a slender terminal joint. The species appears to be a very isolated one, and will probably form a genus allied to *Limnius*, Er., and distinct from the other Central-American Elmini.

Fam. GEORISSIDÆ.

GEORISSUS.

Georissus, Latreille, Gen. Crust. et Ins. iv. p. 377.

The genus *Georissus* is the only form known of the family Georissidæ, and has a wide distribution; the greater number of the twenty described species inhabit the Mediterranean region; one or two are known from Tropical Asia; from Australia and from North America single species are known. None have yet been described from South America; and I have no evidence that the genus exists there.

1. **Georissus minor.** (Tab. IV. fig. 17.)

Brevis, convexus, niger, antennis fuscis; prothorace elytris angustiore, parte anteriore et capite fortiter granulatis, parte posteriore punctis irregularibus impressis; elytris punctis majoribus, profundis, in series regulares digestis.

Long. $\frac{3}{4}$, lat. $\frac{7}{16}$ lin.

Hab. GUATEMALA, San Gerónimo 3000 feet (*Champion*).

This species is very similar to the European *G. similis*; but the individuals are probably only about half the size of those of the European species; the punctures of the series on the elytra are smaller and closer to one another; and there is on the middle of the basal portion of the prothorax a conspicuous but scanty punctuation, the anterior part of the thorax being strongly lobed or hood-like and very rough.

A single individual only has been sent by Mr. Champion.

Fam. CYATHOCERIDÆ.

Antennæ quadriarticulatæ, articulo ultimo maximo ad apicem truncato et pubescente.
Oris partes conditæ.
Tarsi sat elongati, rigiduli, uniarticulati, unguiculo unico terminati.
Elytra integra.

I am obliged to propose a new family name for a single small beetle which shows no relationship of an evident character to any of the hitherto described Coleopterous families. The above very concise definition will not apply, I believe, to any other of the Coleopterous families; and fuller details of the structure will be found in the description of the genus.

The position of the family (I use this term only in deference to the custom of systematic biologists) may for convenience be near *Georissus*, to which it bears a certain similarity in size and sculpture, though on investigation it does not appear to be specially allied to that family.

CYATHOCERUS.

Antennæ (Tab. IV. fig. 18[a]) very short, not so long as the width between the eyes, inserted on an elevation close to the eye at its lower inner margin, and received in repose into a depression at the outside of the front of the head, while their sensitive apex is received into a hollow at the front of the prothorax; they are very short, and consist of four joints, of which the first three are minute, the basal one being a little larger than either of the two following, while the fourth joint is very large and has somewhat the shape of an irregular cup, its apex is truncate and shows a large subelliptical space covered with sensitive pubescence; when the antenna is mounted in Canada balsam it is seen that the third joint projects somewhat into the interior of the large terminal joint.

The head is of very peculiar form, a little similar to that of the genus *Megalops*; the front is perpendicular, and the eyes are placed at the upper part and are very widely separated. There is no external appearance of a mouth; but the lower part of the head is somewhat prominent, and when the underside is carefully examined there is seen to be a plate marked off by a curved suture; this is the labrum, which is thus placed on the underside of the head; the curved portion of the surface into which it fits is the fron t of the mentum, which on examination is found to be a large plate, occupying nearly the whole of the prominent portion of the under surface; the other parts of the mouth are entirely concealed in the interior of the head, and thus, owing to the accurate coadaptation between the labrum and mentum, there appears to be no mouth; in what way the mouth opens I can form no opinion, possibly there may be a slight retraction of the labrum so as to form a small chink for the passage of liquid food. The labrum is broader than long, truncate at its connexion with the clypeus, curved at the sides and narrowed to the front, its anterior margin being slightly truncate; but when the labrum is in its natural position the front and sides apparently form a continuous curve.

The mentum (Tab. IV. fig. 18[b], labium) is large, but, owing to the irregular sculpture and inequalities of the under surface of the head, its contour and proportions cannot be observed till it is extracted, the sutures between it and the neighbouring parts being quite inconspicuous; it is, however, transversely quadrate, not greatly broader than long, and in front is emarginate in a curvilinear manner in adaptation to the front of the labrum; the ligula is apparently excessively minute; and so far as I have been able to form an opinion about its structure, it is that of a transverse section of a hollow cylinder; it projects from the front of the mentum; the minute labial palpi are two-jointed; the apical joint is quite small, and the basal joint is apparently also small, but differs much in the two preparations I have obtained of it; in the one in which the ligula is still attached to the mentum this joint appears slender, while in a detached ligula it appears very broad.

The maxilla (Tab. IV. fig. 18^c) is of extreme fragility and possesses no hard portions, it being, as I have already said, entirely included in the interior of the head; it possesses a single elongate slender lobe, the apex of which is slightly dilated and notched so as to form two short processes; and its inner margin is set with some peculiar setæ or teeth, those at the extremity being broad and flat, while below this they become more elongate, slender, and hair-like. The palpi are apparently three-jointed, the basal joint being stout and strongly elbowed; the two following joints are simply cylindric, and differ little from one another except that the apical one is slightly longer and more slender than the preceding.

The mandible is very delicate, elongate and slender, not much curved; but its apical portion is apparently twisted so as to be on a different plane to the rest of the blade, and at the extremity is somewhat bifid.

The inferior surface of the head when retracted is free, and receives but little protection from the prosternum.

At the front angle of the prothorax there is, looking directly forward, a large hollow, which, when the antenna is retracted, protects its truncate extremity.

The prosternum is a simple transverse band, sending off in the middle backwards a broad and short prosternal process, which does not extend behind the coxæ. These latter are rather small, not prominent; the side pieces of the prosternum do not reach the prosternal process, but are separated from it by a broad space.

The under surface of the body is irregularly sculptured and marked by strong ridges, so that it is most difficult to decide as to what are the true sutures between the different pieces. The middle articular cavities are circular and are broadly separated; the mesosternum is rather large, and in the middle behind penetrates between the coxæ, articulating with the metasternum halfway between the coxæ by a curved suture. The metasternum is rather large; its side pieces are apparently quite concealed by the wing-cases. The hind coxæ are rather broadly separated; the portion to which the trochanter is attached is not large; and there is a second small external piece proceeding outward to articulate with the metasternal side piece.

The abdomen possesses five visible, short, ventral segments, separated by excessively deep sutures; the broad process between the hind coxæ is a part of another segment, the sides of which are concealed by the coxæ; and when the abdomen is dissected off it is seen that this concealed portion consists of two segments, both of which enter apparently into the intercoxal piece. If this interpretation be correct, there are seven ventral segments, two of which are visible in the middle between the coxæ, and the second of the two also at the outside, while the other five form the exposed portion of the hind body, the first of the five being but little longer than the following one; segments 2–4 of similar length, very short; terminal segment as long as the two preceding.

The wings are ample; and the elytra are very convex, completely cover the upper portion of the hinder part of the body, and at the middle of the epipleura exhibit a

very remarkable, abrupt, extremely deep sinuation, in which the extremity of the retracted hind femur reposes.

The legs are slender and feeble, and very similar to one another; the femora extend just to the sides of the body; the tibiæ are short and simple, terminated by a single feeble spur. The tarsi (Tab. IV. fig. 18^{d}, tibia and tarsus) are of moderate length; they are not greatly shorter than the tibiæ; and each consists of a single rigid piece: although some appearance of division arises from the fact that the under margin is somewhat uneven in its outline, and that it bears a few rigid setæ, yet careful microscopic investigation has failed to show traces of any real division. Neither do the prominences alluded to justify us in treating the tarsus as consisting of a number of consolidated joints; for if we were to judge from them, the tarsus would consist of at least seven joints.

1. **Cyathocerus horni.** (Tab. IV. fig. 18.)

Breviter suboblongus, convexus, opacus, niger, antennis testaceis, prothorace versus latera parum conspicue sordide fulvescente; capite perpendiculari, oculis convexis in summo vertice sitis; prothorace transverso, valde inæquali, angulis anticis liberis, acutis; elytris crenato-costatis.

Long. $\frac{3}{4}$, lat. vix $\frac{1}{2}$ lin.

Hab. GUATEMALA, San Gerónimo and Guatemala city (*Champion*).

Prothorax somewhat lobed in the middle, and emarginate on each side in adaptation to the convex eyes, which project above the thorax; the very conspicuous anterior angles are markedly acute; and behind them the thorax is nearly regularly narrowed to the base, the sides not being curved; the surface is very uneven, the middle being much more raised than the lateral parts; along the middle is a broad depression; and when looked at from behind, the middle appears also to be divided by two transverse depressions. The elytra are each marked by three strongly raised elongate costæ, and the suture also is raised; except for these costæ there is no distinct sculpture. On the under surface the ventral sutures are excessively deep, and the femora are more or less fulvescent.

The individuals of this anomalous little creature are usually covered with an efflorescent substance having a saline appearance and quite obscuring the sculpture.

I have been much assisted in my investigation of this curious little insect by my friend Dr. George H. Horn, of Philadelphia, and have great pleasure in associating his name with a creature of so remarkable a nature.

Fam. STAPHYLINIDÆ.

Subfam. *ALEOCHARINÆ.*

This subfamily is the most extensive and the least studied of those comprised in the family; and its treatment in a satisfactory manner is a matter of extreme difficulty. Of the vast number of extra-European forms that no doubt exist but little is yet known, even the North-American forms having been hitherto neglected by entomologists. If we add to this the fact that the Aleocharinæ are nearly all minute or quite small insects, of fragile and loosely articulated structure, with softer chitinous envelope than is usual in the Coleoptera, it will readily be comprehended that the classification of the components of the subfamily has scarcely commenced. The large number of species and genera at present registered in the subfamily (amounting probably to 2000 species and considerably more than 100 genera) renders it, however, advisable that some method shall be adopted in their arrangement, if only with the object of facilitating reference and of saving time; and I shall accordingly make use of that recently proposed by Mulsant and Rey for the species of France, in the 'Histoire Naturelle des Coléoptères de France, Brévipennes, Aléochariens,' introducing, however, some modifications in order to render it more simple. In this scheme the number of joints in the tarsi is considered superior in importance to the condition of the trophi, on which Erichson and Kraatz, the principal previous writers on the family, chiefly based their genera and arrangement. It would be out of place to discuss here the comparative claims of these two methods to superiority; but it is clear that the advantages offered by the tarsal system, as regards facility of verification and simplicity of definition, are very great, and give it, as a provisional method, preponderant importance. I have avoided as far as possible the establishment of new genera; but yet the number proposed in the subfamily will be found not inconsiderable; and as it will be remarked that some of the terms I have used in defining them are new, I may here give a word or two of explanation about them. On examining some of the Staphylinidæ, such, *e. g.*, as a large *Xantholinus*, it will be observed that the middle coxæ are almost without true acetabula; this part of the limb, in fact, merely reposes on the outer surface of the breast, which is more or less vaguely impressed for its accommodation. In other forms, e. g. *Aleochara*, it will be found, on the contrary, that the coxa is imbedded in an abruptly defined cavity surrounded entirely by a well-marked raised margin. Between the extreme forms mentioned a large number of intermediate stages exist, and in the Aleocharinæ offer a satisfactory and readily observed method of differentiating the genera. When these two cavities exist *entirely surrounded* by a raised margin, as in *Aleochara*, I have used the expression "cavities complete:" the completion is effected on the inner side by a prolongation of the mesosternum between the coxæ meeting a prolongation from the metasternum; these prolongations may be called the mesosternal and metasternal

processes, and are each defined by a fine raised border. When these two borders do not meet, I have designated the cavities as incomplete, and the space intervening between their extremities I have called the intercoxal isthmus: this intercoxal isthmus is of variable length and breadth; but in calling it "long" or "short" I have always used the words with reference to its extension in the longitudinal axis of the body. C. J. Thomson first began to use, though in a vague manner, these characters; and to M. Rey we are chiefly indebted for giving them much greater prominence; but they have not yet received all the attention they deserve, and it is advisable that definite terms should be used in writing about them.

Group **ALEOCHARINA.**

All the tarsi five-jointed.

ALEOCHARA.

Aleochara, Gravenhorst, Col. Micr. p. 67 (1802); Erichson, Gen. et Sp. Staph. p. 158.

I have not thought it advisable for the purposes of this work to adopt the genera proposed by Thomson and Rey at the expense of *Aleochara*, but may state that the first three species here enumerated would apparently go into their genus *Aleochara*, and the others, or most of them, into *Baryodma*, Rey. The genus is nearly cosmopolitan.

1. **Aleochara centralis.** (Tab. V. fig. 1.)

Tota nigerrima, nitida, sparsim pubescens; antennis crassissimis, articulis 5°–7ᵐ quam sequentes paulo latioribus; prothorace minus fortiter transverso, quam elytra fere longiore, basi cum lateribus omnino rotundatis; abdomine parce, fortiter punctato, apicem versus multo angustiore.

Long. $6\frac{1}{2}$–11 millim.

Hab. Mexico, Jalapa (*Flohr*); Guatemala, Cerro Zunil 4000 feet (*Champion*); Costa Rica, Irazu 6000 to 7000 feet (*Rogers*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

In the male the seventh dorsal plate is nearly truncate, only very slightly emarginate, and is furnished with about fourteen very minute teeth or serrations, the ventral plate is not at all emarginate; in the female the dorsal plate has the same shape as in the male, but is without the serrations, and the ventral plate is truncate, and its hind margin is set with very dense pubescence, mixed with which are some longer cilia.

This species is very similar to the North-American *A. lata*, Gr., but is undoubtedly distinct; it is of narrower form, more acuminate at the extremity, with considerably longer thorax, and has the fifth, sixth and seventh joints of the antennæ broader in proportion to those following, the hind body less punctate, and the sexual characters of the seventh segment different. It is quite as near to the Chilian *A. atra*, but is larger, has much stouter antennæ, rather longer thorax, and different sexual structure of the seventh segment; an undescribed very close ally exists also in Brazil.

2. Aleochara serrata.

Nigra, elytris rufis, ad angulum exteriorem nigricantibus, antennis fuscis, basi, palpis pedibusque testaceis, ano rufescente, abdomine fortiter punctato; antennis crassis, fusiformibus.
Long. 8 millim.

Hab. Mexico, Tehuantepec (*Sumichrast, coll. Sallé*).—South America, Bahia.

Antennæ stout, the two or three basal joints yellow, the middle joints only very slightly thicker than the penultimate, these latter being rather strongly transverse. Head coarsely punctate. Thorax coarsely punctate, with a griseous pubescence, base and sides much rounded. Elytra a little shorter than the thorax, rather coarsely and closely punctate. Hind body coarsely and rather closely punctate, with the exception of the basal segments, which are but little punctate.

In the male the extremity of the seventh dorsal plate of the hind body is truncate, scarcely perceptibly emarginate in the middle, and bears about twelve distinct, distant, rather coarse, short teeth.

This insect is extremely similar to the well-known European *A. fuscipes*; but the legs, palpi, and base of the antennæ are of a clear red colour, and the apex of the hind body is conspicuously rufescent; the antennæ are rather more slender, and the male characters different. I have described the species from a single badly preserved individual; but a series from Bahia apparently agree, except in having the antennæ rather stouter.

3. Aleochara pauper.

Minus lata, anterius et posterius parum attenuata, nigra; elytris brunneo-testaceis, ad latera infuscatis, antennarum basi pedibusque sordide rufis; abdomine fortiter punctato; antennis brevibus crassis, subfusiformibus.
Long. 6 millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ short and very stout, the three or four basal joints reddish, joints four to ten strongly transverse, the first of them rather smaller than the others, which differ but little from one another. Thorax rather coarsely punctate, shining. Elytra short, scarcely so long as the thorax. Hind body rather coarsely and closely punctate, with the exception of the basal segments.

Although I have seen only a single specimen, it is clear this represents a species distinct from *A. serrata*, the form being more parallel, the colour of the elytra different, the extremity of the hind body less rufescent, and the antennæ shorter and stouter. The specimen is a male, and has the hind margin of the seventh ventral segment serrate, much in the same manner as *A. serrata*.

4. Aleochara bimaculata.

Aleochara bimaculata, Grav. Micr. p. 187[1]; Er. Gen. et Spec. Staph. p. 167[2].
Var. minor. *Aleochara duplicata*, Er. loc. cit.[3].

Hab. North America [1 2].—Mexico (*Flohr, Truqui*), Tehuacan, Cerro de Plumas (*Höge*), Guanajuato, Puebla (*Sallé*).—Antilles, Haiti; South America, Caraccas [3].

Var. minor, elytris immaculatis, prothorace obsoletius punctato. (*A. alticola.*)

Hab. Guatemala, Totonicapam 8500 to 10,500 feet, Quiche Mountains 7000 to 9000 feet (*Champion*).

This species varies greatly in size; and though the smaller individuals are more sparingly punctate, and approximate exceedingly to *A. notula*, yet I think the two are really distinct; *A. bimaculata* is usually twice the size of *A. notula* and much more densely punctured, and even in its most depauperated individuals there always remains a little difference in the punctuation of the thorax and elytra from what exists in *A. notula*. That Erichson's description of *A. duplicata* applies to small specimens of *A. bimaculata* is most probable; but seeing the near approach made by *A. notula*, *A. duplicata* may perhaps prove to be rather a synonym of that species. The species, it will be observed, has as yet only been detected in Guatemala at a great elevation, and as a variety similar to the European variety, *bilineata*, of *A. nitida*.

5. **Aleochara notula.**

Aleochara notula, Er. Gen. et Sp. Staph. p. 167 [1].
Aleochara signaticollis, Fairm. et Germ. Ann. Soc. Ent. Fr. 1861, p. 413 [2].

Hab. Mexico, Las Vigas (*Höge*), Guanajuato (*Dugès, coll. Sallé*); Guatemala, San Gerónimo 3000 feet, Champerico, San Joaquin in Vera Paz (*Champion*); Nicaragua, Chontales Greytown (*Janson*).—Antilles [1]; South America, Chili [2].

This species is variable in size and somewhat in sculpture; and I doubt whether it be distinct from the *A. nitida*, Grav., so common in the eastern hemisphere.

6. **Aleochara lacertina.**

Subparallela, nigra, antennis palpisque fuscis, pedibus fusco-rufis; capite thoraceque nitidissimis, parce punctatis; elytris dense asperato-punctatis; abdomine dense squamoso-punctato.
Long. 4½ millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ rather short, basal joints slender, second shorter than the third; fourth slender, not transverse; five to ten each short, transverse, though not very broad; terminal joint elongate, as long as the two preceding together. Head very sparingly and obsoletely punctate. Thorax rather strongly transverse, sparingly and rather finely punctate. Elytra as long as the thorax, blackish, with the hind margin rufescent, closely punctate, the punctuation having a peculiar granular appearance. Hind body densely punctate, the punctuation peculiar, possessing, especially when looked at from behind, a scale-like appearance. Legs sordid red, tarsi more dilute.

This insect, very readily identified by its peculiar sculpture, is similar in facies to *A. notula*. Only one specimen has been found; it has the hind margin of the last dorsal plate of the hind body rather broad, straight, densely and extremely finely crenulate.

7. **Aleochara verberans.**

Aleochara verberans, Er. Gen. et Sp. Staph. p. 164[1].

Hab. MEXICO, Jalapa (*Höge*), Puebla (*Sallé*).—SOUTH AMERICA, Colombia [1] to Brazil.

This species apparently varies a good deal in the closeness of the punctuation of the hind body: and in this respect the two Mexican individuals before me show considerable discrepancy; but they are pretty certainly conspecific with examples from Para and Rio de Janeiro, considered by Fauvel and myself to agree sufficiently with Erichson's description of *A. verberans*.

8. **Aleochara quadrata.**

Nigra, nitida, parce punctata; elytris rufo-obscuris, pedibus fuscis; antennis parum elongatis, articulis penultimis leviter transversis.
Long. 5 millim.

Hab. MEXICO (*Truqui*).

Antennæ neither elongate nor stout, third joint slightly longer than the second; fourth not stout, as long as broad, fifth also about as long as broad; seventh to tenth transverse, the first of them very slightly so, the last quite evidently; terminal joint rather large, acuminate, quite as long as the two preceding together. Palpi dark. Head sparingly and indistinctly punctate. Thorax strongly transverse, quite sparingly but not finely punctate, shining. Elytra indistinctly rufescent on their disk, shining, sparingly and coarsely punctate. Hind body with a transverse depression at the base of each of segments 2, 3 and 4, and in this depression coarsely punctate, elsewhere almost impunctate. Legs dark piceous, with the tarsi reddish.

This species is allied to *A. verberans*, and has like it four very indistinct punctures placed so as to form a square on the middle of the thorax; but *A. quadrata* is very much more sparingly punctate than is *A. verberans*. I have seen only one specimen.

9. **Aleochara mexicana.**

Nigra, elytris brunneis, ad angulum externum fuscescentibus, antennarum basi fusco-rufa, pedibus rufis abdomine apicem versus fortiter attenuato, crebrius fortiter punctato.
Long. 6–8 millim.

Hab. MEXICO, Tehuacan and Mirador (*Höge*), Juquila (*Boucard, coll. Sallé*); GUATEMALA, San Gerónimo 3000 feet (*Champion*).

Antennæ stout, third joint rather longer than the second, fourth rather longer than

broad, fifth about as long as broad, sixth to tenth evidently transverse; terminal joint acuminate, as long as the two preceding together. Palpi piceous, terminal joint yellow. Head narrow, rather finely punctate. Thorax nearly as broad as the elytra, rather strongly transverse, shining, somewhat finely, moderately closely punctate. Elytra about as long as the thorax, densely punctate, vaguely infuscate at the outer hinder angle. Hind body much narrowed towards the apex, black, the segments not margined with red, closely and coarsely punctate. Legs red, basal joint of hind tarsus about as long as the three following together.

In the male the dorsal plate of the seventh segment of the hind body is a little emarginate behind, and serrate with about twelve small teeth; in the female it is truncate-emarginate and without serration.

Six individuals, differing a good deal in size, but agreeing in other respects, have been found.

10. **Aleochara oxypodia.**

Subgracilis, nigra, subopaca, antennarum basi pedibusque testaceis; elytris brunneis, circa scutellum maculaque magna laterali nigris, thorace brevioribus; abdomine crebrius, minus fortiter punctato.

Long. 5–6½ millim.

Hab. GUATEMALA, Zapote, San Gerónimo, Pantaleon 1700 feet, San Joaquin and Balheu in Vera Paz (*Champion*); PANAMA, Bugaba 1500 feet, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ moderately long; second joint scarcely longer than third; fourth, fifth and sixth each about as long as broad, the following joints slightly transverse; terminal joint elongate, quite as long as the two preceding together. Thorax densely and rather finely granulose-punctate, subopaque, finely pubescent. Elytra short, evidently shorter than the thorax, of a pale brownish colour, black about the scutellum, this colour extending backwards along the suture, at the sides with a large very distinct black mark, reaching the hinder angle, but not the shoulder. Hind body pointed behind, segments 2 and 3 closely and finely punctate, fourth closely and more coarsely, fifth and sixth punctured similarly to the fourth, except that there is much less punctuation on the hind part of each, the hind margins of the sixth and seventh yellow; beneath each segment has the hind margin broadly ferruginous.

In the male the narrow hind margin of the seventh dorsal plate is almost truncate, but is slightly emarginate in the middle; it has no trace of serration; the ventral plate has no trace of emargination. In the female the hind margin of the same dorsal plate possesses a deep notch or emargination in the middle, and the hind margin of the ventral plate is slightly emarginate.

This is one of several species closely allied to *A. tæniata*, Er.; these species, indeed, are so similar that they can only be correctly distinguished by the aid of the sexual characters. They have greatly the appearance of our larger European species

of *Oxypoda*. *A. oxypodia* is distinguished from most of the allies known to me by the middle coxæ being slightly more widely separated. Twenty-three individuals of the species have been found; but of these only two are females, and these unfortunately are from different localities and where males were not found; thus the identification of the sexes as belonging to one species is still a little doubtful.

11. **Aleochara simulatrix.**

Nigra, subopaca, densius subtiliter punctata et pubescens, antennarum basi pedibusque testaceis; elytris brunneis, circa scutellum maculaque magna laterali nigris, thorace brevioribus; abdomine crebrius punctato.
Long. 7 millim.

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

This species, so far as I can judge from a unique female, is extremely similar to *A. oxypodia*, but has peculiar sexual characters, the dorsal plate of the fifth segment of the hind body being prolonged in the middle, with broadly rounded hind margin; the seventh dorsal plate resembles in form that of the male of *A. oxypodia*; and the ventral plate of this latter segment is only very indistinctly emarginate in the middle.

These characters are analogous to those assigned by Solsky (Hor. Soc. Ross. viii. p. 290) to the male of *A. tæniata*, Er.; but I think Solsky probably erred in his identification, and that his *A. tæniata* ♂ is the female of one, his *A. tæniata* ♀ the female of another, species. This is the more probable, inasmuch as Solsky records the locality of his *A. tæniata* as being Cayenne and Peru. As the locality for Erichson's *A. tæniata* is St. John's Island in the Antilles, it is very doubtful whether it is conspecific with either of the two Solskyan species.

12. **Aleochara funestior.**

Nigerrima, dense subtiliter punctata et pubescens, opaca, pedibus fusco-testaceis, tarsis testaceis; antennis fere gracilibus, extrorsum vix incrassatis, articulis penultimis vix transversis.
Long. 6–7 millim.

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 6000 feet (*Champion*).

Antennæ entirely black, third joint a little longer than the second; fourth joint not greatly smaller than the fifth, this rather longer than broad; tenth not quite so long as broad; terminal joint scarcely so long as the two preceding together. Palpi black, with the slender terminal joint yellow. Head narrow, rather closely punctate. Thorax not strongly transverse, much narrowed towards the front, densely punctate and pubescent. Elytra shorter than the thorax, very densely and rather finely punctate. Hind body much narrowed behind, closely and rather finely punctate.

In the male the dorsal plate of the seventh segment of the hind body is truncate, scarcely perceptibly emarginate, and furnished at the hind margin with ten or twelve

serrations, which are so minute as to require very careful observation for their detection. In the female this plate is more deeply emarginate and destitute of serration.

This is a very distinct species, and has the mesosternal process very slender, so that the middle coxæ are more approximate than usual, the carina extending, however, quite to its extremity. Four individuals from Panama and one from Guatemala have been taken.

13. **Aleochara miradoris.**

Fulvo-testacea, antennarum basi pedibusque testaceis, abdomine piceo-rufo, segmentis sexto et septimo rufis; antennis subgracilibus, articulis 5°–10ᵐ leviter transversis; abdomine apicem versus attenuato, subsparsim vix fortiter punctato, nitido.

Long. 6 millim.

Hab. MEXICO, Mirador (*Höge*).

Antennæ slightly thickened externally, third joint a little longer than the second, fourth about as long as broad, fifth to tenth each evidently broader than long; terminal joint rather elongate, a little longer than the two preceding together. Head rather small and short, obsoletely punctate. Thorax rather strongly transverse, a good deal narrowed in front, quite finely, moderately closely punctate, very distinctly and closely pubescent. Elytra about as long as the thorax, densely and rather finely punctate and densely pubescent. Hind body shining, and only very sparingly pubescent; the segments with a moderately coarse and not close punctuation.

Only a single individual of this species has been found; it is a male, and has the hind margin of the seventh dorsal plate very slightly emarginate, and furnished with ten or twelve fine but distinct serrations. The mesosternal lamina is very slender at the extremity; but its carina is entire.

14. **Aleochara sallæi.**

Subparallela, nigra, opaca, dense punctata, antennarum basi, palpis pedibusque fuscis; antennis crassiusculis, articulis 6°–10ᵐ transversis; capite fortiter, thorace elytris abdomineque sat subtiliter dense punctatis, hujus segmentis 2°–5ᵐ summa basi fortiter, quasi rugulose punctatis.

Long. 4–5½ millim.

Hab. MEXICO, Guanajuato (*Boucard, coll. Sallé*).

Second and third joints of antennæ about equal in length, joints six to ten rather strongly transverse, terminal joint not elongate, basal joint or two infuscate red. Palpi obscure red. Head coarsely and rather closely punctate. Thorax rather strongly transverse, densely and rather finely punctate. Elytra about as long as the thorax, very densely punctate. Hind body very densely punctate, at the base of each of the second to fifth segments there is some deeper and coarser confluent punctuation. Legs sordid red.

Of this species I have seen two badly preserved individuals; they have the hind

margin of the dorsal plate of the seventh segment of the hind body slightly emarginate, and may be females. The species is not closely allied to any other; it is a little similar in general appearance to *A. bimaculata*; the middle coxæ are well separated.

15. **Aleochara torquata.**

Nigra, subtiliter pubescens, antennarum basi, palpis pedibusque fuscis; antennis parum elongatis, articulis 4°–10ᵐ transversis; capite fortiter punctato, abdomine sparsim obsolete punctato, segmentis 2°–5ᵐ summa basi fortiter profunde punctato.
Long. 5 millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ blackish, rather paler at the base, third joint about equal to the second in length; fourth a good deal smaller than the fifth, transverse; fifth and following joints rather strongly transverse; terminal joint not elongate, acuminate. Palpi piceous, with pale slender terminal joint. Head narrow, coarsely and rather closely punctate. Thorax not strongly transverse, coarsely and rather closely punctate. Elytra about as long as the thorax, closely and moderately coarsely punctate. Hind body with only fine and scanty punctuation, except on the depressed portion at the base of each of segments two to five. Legs infuscate red, with the tarsi red.

I think this will prove a distinct species from *A. sallæi* (to which, however, it is extremely closely allied), chiefly because the sculpture of the hind body is much less. I have seen only two individuals; and they are not very similar to one another—the one from Guatemala being considerably nearer to the Mexican species than is the other from Panama.

16. **Aleochara angusticeps.**

Gracilis, nigra, parce pubescens, antennarum basi palpisque fuscescentibus, pedibus fusco-rufis; antennis articulis penultimis haud transversis, articulo ultimo elongato; prothorace vix transverso, parce punctato; abdomine segmentis 2°–5ᵐ basi dense fortiterque punctato, apice segmentoque sexto fere impunctatis.
Long. 5 millim.

Hab. GUATEMALA, Paso Antonio 400 feet (*Champion*).

Antennæ rather elongate, nearly black, with the base more dilute, third joint about equal to the second, fourth and following each rather longer than broad; terminal joint remarkably elongate, longer than the two preceding together. Head very narrow, sparingly and obsoletely punctate. Thorax nearly as long as broad, very sparingly punctate. Elytra about as long as the thorax, coarsely, moderately closely punctate.

This insect, as well as those I have placed near it, is very similar to the European species of the *A. mœsta* group; and in *A. angusticeps*, as in *A. mœsta*, the mesosternal carina is extremely fine. I have seen only two individuals, badly preserved, and with the greater part of their pubescence removed.

MASEOCHARA.

Palpi omnes articulo minutissimo supplementali muniti. Prothoracis latera parum inflexa, haud occulta. Coxæ intermediæ sat late distantes; acetabula integra; mesosterni processus cum metasterni apice arcte conjunctus.

This genus is proposed for certain insects having greatly the appearance and nearly the characters of *Polystoma*, Rey, but differing by the structure of the middle coxal cavities, which are quite complete; whereas in *Polystoma* the mesosternal process does not reach the metasternal process, in *Maseochara* it overlaps it, and conceals its extremity; the mesosternal process, too, is broad, and not acuminate as in *Polystoma*; it has no carina. The characters are taken from *M. opacella* and *M. semivelutina*: two other of the species (*M. depressa* and *M. duplicata*) are aberrant, and have much the appearance of large *Homalotæ*, and will perhaps have to be separated from *Maseochara* as two distinct genera; they are very similar to, and apparently really allied to certain species inhabiting New Guinea (*Homalota lacrymosa* and *H. basalis*, Fauv.), described by an oversight as belonging to the genus *Homalota*.

1. **Maseochara semivelutina.**

Aleochara semivelutina, Solsky, Hor. Soc. Ent. Ross. v. p. 120[1].

Hab. Mexico[1], Puebla (*Sallé*), Guanajuato (*Dugès, coll. Sallé*), Tehuacan, Mirador (*Höge*).

In the male of this species the seventh dorsal plate of the hind body terminates in six elongate teeth; these teeth are obtuse at the apex, and slightly curved inwards; the outer tooth on each side is shorter than the others, and less obtuse at the apex.

The insect is apparently rare, only one individual having been brought from each of the localities recorded.

2. **Maseochara opacella.** (Tab. V. fig. 2.)

Subgracilis, coriaceo-opaca, abdomine subnitido, nigricans, pedibus nigro-piceis, tarsis rufescentibus; capite, thorace elytrisque obsolete punctatis; thorace haud transverso, angulis posterioribus obtusis.

Long. 8–9 millim.

Hab. Mexico, Tehuacan, Mirador, Misantla (*Höge*).

Antennæ black or piceous black, rather elongate and slender, the penultimate joint not, or only slightly, transverse. Palpi piceous, with the slender terminal joint yellowish. Head narrow and elongate, very obsoletely and sparingly punctured, very dull, the surface being densely and finely granulate or coriaceous. Thorax nearly as long as broad, rounded at the sides, and a little narrowed behind; the hind angles very obtuse, but distinct, the surface-sculpture like that of the head. Elytra scarcely so long as the thorax, their punctuation not quite so obsolete as that of the thorax. Hind body somewhat shining, irregularly punctate, the base of each segment quite without punctuation; segments 2 to 4 rather finely punctate behind, 5 and 6 more coarsely and irregularly.

The dorsal plate of the seventh segment of the hind body is armed behind with six teeth as in *M. semivelutina*; the penultimate joints of the antennæ appear to be slightly shorter in the female than in the male.

Although closely allied to *M. semivelutina*, this species is readily distinguished by the black (not red) elytra, by the less transverse thorax, the hind angles of which have not entirely disappeared, and by the more slender antennæ. Ten individuals have been found.

3. **Maseochara robusta.**

Major, nigra, coriaceo-opaca, abdomine subnitido, nigricans, elytris sanguineis, tarsis piceis; capite, thorace elytrisque obsolete punctatis; thorace transverso, basi cum angulis posterioribus omnino rotundatis; tibiis anterioribus et intermediis dense fulvo pubescentibus, illis apice unco curvato perelongato armatis.

Long. 15 millim.

Hab. Mexico, Tehuacan (*Höge*).

Although I have seen only a single individual, I am not able to reduce this insect to a variety of *M. semivelutina*; the size is greater, the clothing of the front and middle tibiæ is very dense and remarkable, and the development of the apical spur of the front legs is very conspicuous, and the middle coxæ are more widely separated. This unique individual is a female.

4. **Maseochara gracilis.**

Subparallela, opaca, abdomine subnitido, nigricans, elytris sanguineis; antennarum basi, palpis pedibusque rufis; capite, thorace elytrisque obsolete punctatis; thorace subtransverso, angulis posterioribus obtusis.

Long. $5\frac{1}{2}$ millim.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*).

Antennæ with the four basal joints red, the others darker; fifth joint nearly as long as broad, the tenth evidently, but only slightly, transverse (in the male). Head rather broad and not elongate. Thorax evidently, but only slightly, broader than long, but little rounded at the sides, not much narrowed behind, the hind angles distinct, obtuse. Elytra about as long as the thorax. Hind body finely punctate, the punctures not dense, extending to the base of each segment. Legs red.

This insect is closely allied to *M. opacella*, but is not half the size, has the antennæ less elongate, and is easily distinguished by the colour of the legs, palpi, base of antennæ and elytra. I have seen but a single individual; it is a male, and has the seventh dorsal plate armed with teeth like *M. semivelutina* and *M. opacella*.

5. **Maseochara depressa.**

Depressa, parcius pubescens, opaca, abdomine sat nitido, nigra, tibiis apicem versus picescentibus, tarsis rufis; capite, thorace elytrisque obsolete, minus subtiliter, punctatis; thorace transversim subquadrato, angulis posterioribus nullomodo rotundatis.

Long. 4–5 millim.

Hab. Guatemala, near the city (*Champion*).

Antennæ rather short and stout; second and third joints rather short and stout, subequal; fifth to tenth transverse, the last of them rather strongly so. Palpi sordid yellow. Head rather broad and short, very dull, quite obsoletely and sparingly punctate. Thorax evidently but not greatly broader than long, the sides a little rounded near the front angles; behind the middle not rounded, but slightly narrowed towards the base, the hind angles quite distinct, the surface very dull, obsoletely punctate. Elytra about as long as the thorax, not quite so dull as the thorax, rather finely and moderately closely subobsoletely punctate. Hind body less dull than the anterior parts; segments two to four finely, five and six sparingly punctate.

This insect is of more depressed form than its congeners before described, and has the head less prolonged in front; the middle coxæ are widely separated, the metasternal process between them being largely developed. The legs are sometimes more dilute in colour, and the elytra occasionally obscurely piceous. The male has the hind margin of the dorsal plate of the seventh segment of the hind body armed with six stout, short teeth.

6. **Maseochara duplicata.**

Depressa, parcius pubescens, opaca, abdomine nitido, nigra, tibiis apicem versus picescentibus, tarsis rufis; capite, thorace elytrisque obsolete punctatis; abdomine parce punctato; prothorace haud transverso, basin versus angustato, basi rotundata, margine basali in medio leviter incrassato et subtruncato.

Long. 4–5 millim.

Hab. Mexico, Jalapa (*Höge*), Cordova (*Sallé*); Guatemala, near the city, Las Mercedes 3000 feet, Cerro Zunil 4000 to 5000 feet (*Champion*); Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This insect is extremely similar to *M. depressa*; but the thorax is rather more elongate, and the slight peculiarity of its structure in front of the scutellum is diagnostic of *M. duplicata*. Although so extremely similar in appearance, it is doubtful whether the two insects will prove to be congeneric; for in *M. duplicata* the mesosternal process is quite slender. In the male of *M. duplicata* the teeth existing on the hind margin of the seventh dorsal plate of the hind body in *M. depressa* are absent, the margin being very obscurely crenulate.

MICROGLOSSA.

Microglossa, Kraatz, Berl. ent. Zeit. 1862, p. 300.
Haploglossa, Kraatz, Ins. Deutsch. ii. p. 78.

This genus at present consists of about a dozen European, one Japanese, and two Chilian species.

1. **Microglossa mexicana.**

Picea, antennis, palpis, pedibus abdominisque apice rufis; capite, thorace elytrisque crebre sat fortiter, abdomine densius, punctatis; prothorace fortiter transverso, antrorsum leviter angustato.
Long. 4 millim.

Hab. Mexico Cordova (*Sallé*).

Antennæ short and stout, joints four to ten differing little from one another, each strongly transverse. Thorax nearly twice as broad as long, rounded at the sides and a little narrowed in front, not coarsely nor closely, but quite distinctly punctate and pubescent, a little shining. Elytra longer than the thorax, with rather close and coarse punctuation. Hind body very densely and not coarsely punctate. Legs clear red, rather short.

This insect is extremely similar to the European *M. pulla*, Gyll.; but the unique individual described is slightly larger than those of *M. pulla*, and the thorax and elytra are a little less densely and coarsely punctate and pubescent, the thorax is shorter and the antennæ unicolorous. *M. mexicana* departs, however, in a conspicuous manner from the European insect by the structure of the mesosternal process, which is considerably broader, and not attenuate or acuminate at the extremity; this unique individual is a male, and has the ventral plate of the seventh segment of the hind body produced in the middle and ciliate, like the corresponding sex of *M. pulla*.

AMBODINA.

Palpi maxillares articulo quarto parvo, subulato, absque articulo supplementali. Genæ marginatæ. Prothoracis lateria valde inflexa, omnino occulta. Coxæ intermediæ late distantes; mesosterni processus elongatus, in medio longitudinaliter carinatus, apice latus, truncatus, cum metasterni processu arcte conjunctus.

The insect for which this genus is established has quite the appearance of a *Microglossa*, or a small *Aleochara* of the subgenus *Baryodma*, Rey; but from both of these forms it is distinguished by the widely separated middle coxæ; this character renders its location in *Microglossa* quite out of the question, while from *Aleochara*, with which, in respect of the pectoral structure, it is less discordant, it is quite separated by the want of the supplementary joint to the palpi. I have but a single individual for examination, and am not quite sure of the number of joints in the front tarsus; for one of the legs is lost, and the other in such a position that the structure of its tarsus cannot be satisfactorily observed with the microscope: thus, although I cannot observe more than four joints, I believe this member to be five-jointed; for the general facies of the insect bespeaks its close affinity with *Aleochara* and *Microglossa*, which possess five-jointed front feet. The middle and hinder tarsi are certainly five-jointed.

1. **Ambodina granulata.**

Parum elongata, opaca, breviter griseo-pubescens, nigra, elytris pedibusque rufo-testaceis, antennis brevibus,

extrorsum incrassatis, articulis 5°–10^m fortiter transversis, basi rufo-obscura; abdomine apicem versus attenuato, densissime punctato, segmentorum marginibus posterioribus ferrugineis.
Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ shorter than head and thorax, second and third joints rather elongate and slender, almost similar to one another; fourth quadrate, much narrower than the fifth, which, together with the following ones, is rather strongly tranverse; terminal joint stout, rather short. Head short and broad, very much narrower than the thorax, quite dull, only very indistinctly punctate, with a distinct fine pale pubescence. Thorax very strongly transverse, twice as long as broad, as broad at the base as the shoulders of the elytra, slightly narrowed in front, the greatly deflexed anterior angles very indistinct; the surface quite dull, with a fine but quite distinct granular sculpture. Elytra scarcely longer than the thorax, pale red, densely punctate. Hind body very densely punctate, the segments not distinctly transversely impressed at the base, all the segments margined with red, the apex dull red. Legs slender; basal joint of hind tarsus about as long as the two following together.

Only a single individual, of uncertain sex, has been received; the peculiar sculpture, consisting of a granulation rather than an impressed punctuation, should much facilitate its recognition.

POLYLOBUS.

Polylobus, Solier, Gay, Hist. Chil. iv. p. 354; Fauv. Bull. Soc. Norm. x. Faune du Chili, p. 43 (sep. copy).

This genus comprises ten species peculiar to Chili; and to these M. Fauvel has recently added five others from Australia. The insect here ascribed to the genus, on the authority of a single ill-preserved exponent, has quite the appearance of its Chilian representatives; but I cannot see with certainty that it has more than four joints to the front tarsi; and if this be really the case it will probably prove to be the representative of a new genus to be located in the Myrmedoniina near Hoplandria.

1. Polylobus advena.

Minus depressus, rufo-testaceus, pectore abdomineque nigricantibus, hujus segmentorum marginibus testaceis; antennis parum elongatis, apicem versus incrassatis; prothorace rotundato-transverso; abdomine crebre punctato.
Long. circ. $3\frac{3}{4}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ rather slender at the base, a good deal thickened at the extremity; third joint hardly so long as second; fourth small, as long as broad; fifth to tenth transverse; terminal joint obtuse, rather short. Head only half as broad as the elytra. Thorax strongly transverse, much rounded at the sides and base, so that the hind angles have disappeared, distinctly narrower in front than at the base, the surface closely, extremely

finely punctate. Elytra longer than the thorax, of a pale yellow colour, rather closely and finely punctate, the hind margin deeply sinuate at the outer angle. Hind body convex, much turned upwards, narrowed behind; the segments partly black, partly red; on those at the base the red colour predominates, while at the extremity the reverse is the case; closely punctate. Legs clear reddish yellow.

In the male there is an elongate carina along the middle of the posterior part of the sixth dorsal plate of the hind body, and on the following segment a similar but less elevated keel.

Only a single badly preserved individual has been found.

OXYPODA.

Oxypoda, Mannerheim, Brachel. p. 69 (1830); Erichson, Gen. et Sp. Staph. p. 141.

The species of this extensive genus reach the number of one hundred and fifty, and are chiefly characteristic of the European region; one or two, however, have been described from North America, one from Brazil, and several from Chili. Of the species here described, *O. clavigera* is assigned with some doubt to the genus, and another, *O. palpalis*, will no doubt prove to be entitled to generic distinction.

1. **Oxypoda clavigera.**

Minuta, brevior, dense subtilissime punctulata, omnino brevissime inconspicue pubescens, opaca, rufo-testacea, antennis, capite abdomineque ante apicem brunneis, antennarum basi pedibusque testaceis; antennis brevibus, extrorsum incrassatis, articulis penultimis valde transversis.

Long. $1\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ short, much thickened outwardly, third joint shorter than the second, fourth to tenth each strongly transverse; terminal joint stout, as long as the two preceding together. Head broad and short, very finely punctulate; eyes rather small. Thorax strongly transverse, very convex transversely, very finely punctate. Elytra short, scarcely longer than the thorax, very finely punctate, hind margin almost without sinuation near the outer angle. Hind body very densely punctate, fourth and fifth segments infuscate.

The antennæ of this minute insect are very short and stout for an *Oxypoda*; but I believe it to belong to the genus, although the three individuals found are so much covered with gum tragacanth that I cannot verify their structural characters.

2. **Oxypoda certata.**

Angustula, posterius acuminata, dense subtilissime punctulata, opaca, testacea, antennis (basi excepta) elytris ad angulum exteriorem abdomineque apicem versus fuscescentibus; antennis subgracilibus, articulis penultimis leviter transversis.

Long. 3–$3\frac{1}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ rather slender, third joint shorter than the second, fifth about as long as broad, tenth slightly transverse; terminal joint rather elongate, as long as the two preceding together. Head about half as broad as the elytra. Thorax transverse, convex, narrowed in front, hind angles very obtuse; the colour yellow, but the anterior portion usually more or less vaguely and broadly infuscate; very finely punctate. Elytra longer than the thorax, punctured like it, yellow, largely infuscate at the hind angle externally, hind margin slightly sinuate near the outer angle. Hind body pointed, very densely and finely punctate, the three or four apical segments darker in colour than the basal ones.

This insect is similar to the European *O. alternans*, but is smaller, and the mesosternal process is short, the middle acetabula being very incomplete. The small series of seven individuals are unfortunately very badly preserved.

3. **Oxypoda championi.**

Rufo-testacea, subtilissime pubescens, subtilius punctata; antennis breviusculis, extrorsum crassioribus, articulis 6°–10^{m} transversis; prothorace convexo, parce punctato, abdomine æqualiter crebre punctato.
Long. 4 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ yellow, short, distinctly thickened externally, third joint shorter than the second; from the fourth to the tenth each is a little broader than its predecessor; the fourth and the fifth each about as long as broad, the others decidedly transverse; terminal joint stout, scarcely as long as the two preceding together. Head small, scarcely half as broad as the elytra. Thorax convex, evidently broader than long, but not strongly convex; base, sides, and hind angles rounded, the surface sparingly punctate. Elytra scarcely longer than the thorax, rather sparingly punctate. Hind body attenuate behind, rather closely but not densely punctate.

This insect has the ordinary appearance of our European *Oxypodæ*; it is described from a single individual; the fifth and sixth dorsal plates of the hind body have each a fuscous cloud in the middle, which may be a result of decomposition.

4. **Oxypoda plebeia.**

Gracilis, rufo-testacea, opaca, dense subtilissime punctulata et pubescens, elytris in medio subfuscis, abdomine segmento quinto sextique basi fuscis; antennis parum elongatis, articulis 5°–10^{m} transversis; prothorace convexo, transverso; abdomine densissime subtilissimeque punctulato.
Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Terminal joint of antennæ elongate, rather longer than the two preceding together. Thorax nearly twice as broad as long, convex, narrowed in front, closely punctate. Elytra rather longer than the thorax, densely punctate, each very vaguely darker about

the middle towards the side. Hind body pointed, very evenly, densely and finely punctulate; the fifth dorsal plate dark, and also the base of the sixth.

This insect, similar in many respects to *O. championi*, is smaller and narrower, has a more elongate terminal joint to the antennæ, and the punctuation denser and finer. Only a single individual has been found.

5. **Oxypoda inepta.**

Angustula, nigricans, antennarum basi, palpis pedibusque sordide testaceis, abdominis apice ferrugineo; sat crebre subtiliter punctata, abdomine apicem versus subattenuato crebrius punctato; antennis brevibus, crassiusculis.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ short and stout, thickened externally, third joint rather shorter than the second, fourth to tenth each transverse, terminal joint rather short. Head convex, rather narrow, sparingly punctate, rather shining. Thorax convex, strongly transverse, evenly and finely, not densely punctate and pubescent. Elytra not longer than the thorax, similarly punctate. Hind body rather slender, narrowed from the fifth segment to the extremity, closely and evenly punctate. Legs rather short, dark yellow.

This species has the anterior parts more sparingly punctate than is usual in the genus. Only a single individual has been found.

6. **Oxypoda carinata.**

Dense punctata, opaca, nigra, antennarum basi, palpis pedibusque sordide testaceis, elytris abdominisque segmentorum marginibus ferrugineis; antennis mediocribus, articulis 7°–10^{m} leviter transversis; abdomine densissime, subtilissime, æqualiter punctulato.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ not elongate nor stout, third joint equal to the second, the next three or four joints each about as long as broad, the following ones slightly transverse, terminal joint as long as the two preceding together. Head about half as broad as the elytra. Thorax transverse, very convex, slightly curved at the sides, rounded and narrowed in front, densely punctate. Elytra a good deal longer than the thorax. Hind body regularly narrowed from the base to the extremity, very densely and finely punctured, the hind margins of the segments ferruginous.

This insect is very similar to the European *O. opaca*, but is only half the size of the individuals of that species, the antennæ are less elongate, the punctuation is not quite so fine, and the mesosternum is carinate. Only a single individual has been found.

7. **Oxypoda microps.** (Tab. V. fig. 3.)

Fusco-nigra, elytris fuscis, abdominis apice piceo, palpis pedibusque fusco-testaceis; capito angusto, oculis

parvis; prothorace transverso elytris latiore et longiore; abdomine omnino densissime subtilissime punctato, opaco.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Totonicapam, between 8500 and 10,500 feet (*Champion*).

Antennæ rather slender, the basal joint sordid red, third joint quite as long as the second, all the joints longer than broad, terminal joint slender and elongate, as long as the two preceding together, more dilute in colour, being obscurely flavescent towards the apex. Head small, subacuminate in front, with quite small eyes. Thorax large, strongly transverse, very convex transversely, rounded at the sides and a little narrowed in front, rather closely punctate. Elytra not so long as the thorax, closely and somewhat coarsely punctate. Hind body much more densely and finely punctate than are the anterior parts.

This is a peculiar species with very short metasternum, so that the middle coxæ very nearly attain the hind margin of the metasternum; the mesosternum is carinate along the middle: the structure of the front tarsi is very obscure; but I think they are five-jointed. Three individuals have been found.

8. **Oxypoda palpalis.** (Tab. V. fig. 4.)

Angustula, piceo-ferruginea, antennarum basi, palpis, pedibus abdominisque apice testaceis, crebre punctulata evidenterque pubescens; antennis crassis, articulis 4°–10^{m} fortiter transversis.
Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ stout, of *Calodera*-like form, ferruginous, paler at the base; third joint rather short, shorter than the second; fourth very short, strongly transverse, a little narrower than the following joints, which are all similar in breadth and nearly so in length; the terminal joint is elongate, longer than the two preceding together, obtuse at apex. Maxillary palpi elongate and slender. Head narrow, obsoletely punctate. Thorax convex, not quite so long as broad, rounded at the sides and base, and narrowed in front, obscurely punctate. Elytra about as long as the thorax, moderately closely and finely punctate. Hind body elongate and slender, pointed behind; the basal segments pitchy, ferruginous behind; the seventh and the greater part of the sixth yellow. Legs yellow; the hind tibiæ rather short, their tarsi elongate, fully as long as the tibiæ.

Only one individual has been found. The insect is an aberrant one, and will no doubt have to be removed from *Oxypoda*, if it be only on account of the elongate third joint of the maxillary palpi, which is similar to that extant in *Myllæna*. The tarsi are slender and bear a rather long pubescence; and their articulations are very difficult to distinguish: I am sure, however, those of the hind feet are five-jointed, but am not quite certain that there are more than four articles on the middle feet, though I believe I distinguish five. One of the front feet is broken off; and I am quite unable to form any

opinion as to the structure of the other, owing to its being covered with gum tragacanth. The middle coxæ are distinctly separated; and the union between the mesosternal and metasternal processes is very intimate, indeed so that the suture is obliterated.

EUTHORAX.

Euthorax, Solier in Gay's Hist. fis. y pol. Chile, Zool. iv. p. 345; Lac. Gen. Col. ii. p. 156.
Myrmecochara, Kraatz, Linn. Ent. xi. p. 40 (1857).

This genus has been merged in *Oxypoda*, but is pretty certainly entitled to distinct rank, and will comprise, besides the Chilian species of Solier, and the North-American insect described by Kraatz, the Amazonian *Oxypoda aliena*, Sharp.

1. **Euthorax pictipennis.**

Myrmecochara pictipennis, Kraatz, Linn. Ent. xi. p. 41[1].

Hab. North America, Louisiana[1], Texas (*Fauvel*).—Mexico, Jalapa (*Höge*).

This species is reputed to inhabit the nests of Termites. Mr. Höge has only captured a single individual.

OCYOTA.

Tarsi omnes 5-articulati, posteriores articulo basali elongato, sequentibus duobus simul sumtis æquali. Prothoracis pars lateralis parum abrupte inflexa. Coxæ intermediæ subdistantes; metasternum inter eas sat productum, cum mesosterni apice acuminato contiguo.

This genus is established for an insect having quite the appearance of the large species of *Homalota*, of the *H. xanthoptera* group, but having the intermediate coxæ more separated, and the metasternum produced far forward between the coxæ, so that its truncate apex touches the acuminate extremity of the mesosternum, and the basal joint of the hind tarsi elongate. The front tarsi are, I believe, five-jointed; but the division between the fourth and fifth joints, in the unique and badly preserved individual at my disposition, is obscure, and on this point I may be wrong. The genus may be placed near *Oxypoda*; but should the front tarsi prove to be only four-jointed, it will be transferred to a position between *Myrmedonia* and *Homalota*, where its facies would lead one to expect its natural position should be.

1. **Ocyota dubia.**

Nigro-fusca, elytris fusco-brunneis, antennarum basi pedibusque testaceis; antennis crassis, setulosis, articulis penultimis transversis; prothorace transversim subquadrato, basin versus leviter angustato, sat crebre punctulato; elytris prothorace parum longioribus crebre punctatis; abdomine apicem versus attenuato, basi sparsim punctato.

Long. 6 millim.

Hab. Guatemala, Capetillo (*Champion*).

Similar in appearance to the European *Homalota xanthoptera*, but with the hind

body more narrowed behind, and therefore less parallel. Antennæ stout, the two or three basal joints yellowish, third joint longer than second, fifth to tenth transverse; eleventh large, acuminate, quite as long as the two preceding together. Thorax rather broader than long, a little narrowed behind, rather narrower than the elytra, sparingly punctate, the hind angle very obtuse. Elytra rather closely punctate. Hind body with segments two to four sparingly punctate, the fifth and sixth almost impunctate. Legs clear yellow.

The unique individual before me is no doubt a male; for although without distinctive characters on the hind body, the second, third, fourth, and fifth joints of the antennæ are densely furnished on one side with setæ.

PHLŒOPORA.

Phlœopora, Erichson, Käf. Mark.-Brand. i. p. 314 (1837).

This genus consists of about twenty species of minute Staphylinidæ, distributed in most parts of the world; but probably South and Central America are their head quarters. A considerable number of the Central-American species have their head borne on a comparatively narrow neck, and more disengaged from the thorax than their European congeners, and, in consequence of this and their more slender form, have a somewhat Falagrioid appearance; but these species cannot be treated as a distinct genus, the gradations of structure being too numerous to permit of this.

1. Phlœopora fenestrata.

Nigra, nitida, parce punctata et pubescens, antennarum basi palpisque fuscis, pedibus fusco-testaceis, elytris ad apicem testaceo-maculatis; antennis crassis, articulis 5°–10^{m} fortiter transversis; prothorace sat elongato, anterius rotundato, fortiter subobsolete punctato, linea media glabra, basi transversim foveolata.
Long. 3 millim.

Hab. GUATEMALA, San Gerónimo, San Joaquin in Vera Paz (*Champion*).

Antennæ short and stout, thickened externally; fourth joint scarcely transverse, the following strongly so. Head broad, rather broader than the thorax, with narrow neck, black, shining, very sparingly punctate. Thorax longer than broad, a good deal narrower than the elytra, a little narrowed behind, with a rather coarse but indistinct punctuation, and down the middle a smooth space, at the base with a transverse impression, which is more or less distinctly divided by the smooth middle line, according to the direction from which it is observed. Elytra a little longer than the thorax, shining black, at the apex with a rather large yellow patch common to the two, sparingly punctate. Hind body slender, rather sparingly and not finely punctate; the seventh segment obscurely granulate, its extremity rounded.

Six specimens have been found; I do not observe any sexual character among them. The rather elongate form, narrow neck, and rounded front to the thorax give to this and the allied species a somewhat Falagrioid facies.

2. **Phlœopora glabra.**

Nigra, nitida, subglabra, antennarum basi palpisque piceis, pedibus fusco-testaceis, elytris ad apicem picescentibus; antennis sat crassis, articulis 5°–10^{m} transversis; prothorace sat elongato, basi transversim impresso.
Long. 3 millim.

Hab. GUATEMALA, Senahu in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species is very closely allied to *P. fenestrata*; but the antennæ are not so thick, and the surface is less punctate, the head, thorax, and elytra being almost impunctate, and the hind body punctate in a distinct manner only at the base of the second and third segments; the elytra are only vaguely picescent behind; and the impression at the base of the thorax is remarkably distinct.

Only a single individual has been found in each of the two localities.

3. **Phlœopora alticola.** (Tab. V. fig. 5.)

Nigra, antennarum basi elytrisque fuscis, palpis pedibusque sordide testaceis; parce punctata, parum nitida; antennis brevibus, articulis 5°–10^{m} transversis; prothorace magis longo quam lato, anterius rotundato; abdomine fere impunctato.
Long. 4–4½ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ stout, fourth joint hardly so long as broad, fifth to tenth each rather strongly transverse. Head very sparingly punctate, with rounded hinder angles and narrow neck. Thorax longer than broad, rounded in front, scarcely narrowed behind, sparingly and indistinctly punctate, not shining, with a small, undivided, transverse impression at the base in the middle. Elytra elongate, a good deal longer than the thorax, sparingly punctate, of fuscous or picescent colour, the hind margin rather deeply sinuate on each side. Hind body slender and elongate, almost impunctate, even the basal transverse impressions being without distinct sculpture; the hind margin of the sixth segment yellowish, the seventh segment pitchy yellow.

Seven individuals have been found. I see no sexual distinctions; the seventh dorsal plate is without granulations.

4. **Phlœopora sinuata.**

Griseo-pubescens, anterius subopaca, abdomine subnitido, nigricans; antennis, palpis pedibusque testaceis, elytris abdominisque apice dilute rufis; antennis crassiusculis, articulis 5°–10^{m} transversis; elytris dense punctatis, ad marginem posteriorem utrinque profunde sinuatis; abdomine basi crebre, apicem versus sparsius, punctato.
Long. 4–4½ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ pale, rather stout; fourth joint quadrate, a good deal smaller than the fifth;

fifth to tenth very similar to one another, each rather strongly transverse. Head short and broad, with narrow neck, rather dull, obsoletely punctate, but distinctly pubescent. Thorax about as long as broad, rounded in front, slightly narrowed behind, with punctuation and pubescence similar to those of the head; basal impression very vague. Elytra elongate, much longer than the thorax, clear red, closely and finely punctate, not shining; the hind margin sinuate on each side, and the outer angle very distinctly prolonged. Hind body picescent, hind margins paler, the posterior portion of the sixth segment and the whole of the seventh yellow; the basal segments closely punctate at the base of each, sparingly at the hind margin; fifth, sixth, and seventh segments quite sparingly punctate.

Two individuals have been found; they have the dorsal plate of the seventh segment of the hind body quite smooth, and its hind margin a little emarginate in the middle.

5. **Phlœopora rufipennis.**

Griseo-pubescens, subopaca, nigricans, antennis, palpis pedibusque testaceis, elytris abdominisque apice dilute rufis; antennis minus crassis, articulis 5°–10^{m} transversis; elytris dense punctatis, ad marginem posteriorem utrinque parum sinuatis; abdomine crebre punctato.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Las Mercedes 3000 feet, Zapote, Cahabon in Vera Paz (*Champion*); PANAMA, Bugaba (*Champion*).

Head short and broad, with rather narrow neck, densely and very finely punctured, quite dull. Thorax about as long as broad, rounded in front, distinctly narrowed behind, very densely and obscurely punctate, basal impression indefinite. Elytra longer than the thorax, densely and finely punctured, quite dull. Hind body picescent, with the hind half of the sixth and the whole of the seventh segment yellow; the three basal segments closely, the following more sparingly punctate. Legs clear yellow.

Ten specimens in all have been found of this species; the seventh dorsal plate and the hind part of the sixth are very finely granulate; the former is nearly truncate behind, with the outer angles rounded, and a very fine raised margin.

6. **Phlœopora læticula.**

Parce pubescens et punctata, nitidula, subdepressa, rufo-testacea, antennis (basi excepta) fuscis, capite, pectore abdominisque fascia ante apicem nigris, elytris pedibusque testaceis; prothorace subquadrato, basi in medio parum profunde transversim impressa.

Long. 3 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet, Capetillo (*Champion*).

Antennæ rather short, moderately stout, joints 5–10 transverse. Head black, mandibles and palpi red, very sparingly and obsoletely punctured, shining. Thorax rather narrow, about as long as broad, scarcely narrowed behind, sparingly and very indistinctly

punctured, shining. Elytra longer than the thorax, sparingly punctate, hind margin but little sinuate. Hind body quite sparingly punctate, the basal transverse depressions not punctate, the four basal segments red; fifth and sixth black, hind margin of the latter and the seventh segment yellow; these segments without granulation, the hind margin of the seventh rounded.

Five specimens have been found on Totonicapam; they exhibit a slight infuscation of variable definiteness at the side of each wing-case and about the scutellum. The three individuals from Capetillo form a variety of rather smaller size, and with the head and antennæ rather more dilute in colour.

7. **Phlœopora furcata.**

Depressa, parallela, parce punctata et pubescens, sat nitida, nigra, antennis, palpis pedibusque testaceis, elytris picescentibus; prothorace quadrato, basi vix perspicue impressa.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ short and rather stout, a good deal thickened outwardly; third joint small, being much shorter than the second, fourth to tenth each rather strongly transverse. Head short and broad, as broad as the thorax, hind angles but little rounded; neck moderately broad, the surface very sparingly punctate. Thorax nearly square, except that the front is a little rounded, and the sides very slightly narrowed behind, the surface very sparingly punctate and finely pubescent. Elytra much longer than the thorax, sparingly and finely punctate, picescent, or piceous black in colour. Hind body only very finely and sparingly punctate, the basal transverse impressions without punctuation.

The species is remarkable by the structure of the seventh dorsal plate of the hind body, which is prolonged on each side into a stout elongate spine. A series of eighteen examples has been found; the variation shown by them is but slight, and is chiefly seen in the coloration of the elytra, which are of a pitchy colour, but in some cases darker than in others.

8. **Phlœopora crassula.**

Minus depressa, dense punctata, subtiliter pubescens, opaca, nigra, elytrorum margine posteriore rufo, antennarum basi, palpis pedibusque testaceis; prothorace transversim subquadrato, basi haud impressa.
Long. 3 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ short, stout; third joint a little shorter than second; joints four to ten strongly transverse. Head small, much narrower than the thorax, densely punctate, dull. Thorax as broad as the elytra, straight at the sides, not narrowed behind, not quite so long as broad, more rounded at the base than in front, transversely rather convex, densely, finely, and evenly punctate, without any trace of basal impression.

Elytra a little longer than the thorax, blackish, with the hind margin rather broadly red, closely punctate in a manner similar to the thorax. Hind body densely punctate. Legs rather dusky yellow; the femora more dusky than the tibiæ.

The male of this distinct species has the dorsal plates of the sixth and seventh ventral segments covered with rather coarse granules. Four individuals have been found.

9. **Phlœopora flavipennis.**

Minor, dense subtilissime punctulata et pubescens, opaca, antennis, palpis, pedibus elytrisque testaceis; antennis sat crassis, articulis 5°–10ᵐ transversis; prothorace quadrato, elytris hoc vix longioribus.
Long. $2\frac{1}{3}$ millim.

Hab. GUATEMALA, Las Mercedes 3000 feet (*Champion*).

Antennæ only moderately stout, and but little thickened transversely. Head broad and short, rather narrower than the thorax, densely and obscurely punctured. Thorax as long as broad, straight at the sides, densely and very finely punctate. Elytra only a little longer than the thorax, of yellowish colour, more obscure at the base than at the apex, densely and finely punctured, quite dull; hind margin very little sinuate. Hind body densely and finely punctate, sordid yellow at the extremity.

This insect is very similar in form and appearance to the well-known *P. reptans* of Europe; but the individuals are not half the size of those of the European species, and the neck, though comparatively broader than in most of the other Central-American species, is narrower than in the European insect, and the hind margin of the wing-cases is less sinuate. The two individuals found do not exhibit any sexual character.

10. **Phlœopora debilis.**

Minor, dense subtilissime punctata et pubescens, opaca, antennis, palpis pedibusque sordide testaceis, elytris brunneis; antennis haud crassis, articulis 5°–10ᵐ transversis; prothorace quadrato, elytris hoc vix longioribus.
Long. 2 millim.

Hab. GUATEMALA, Zapote (*Champion*).

This minute and obscure *Phlœopora* appears to be very closely allied to *P. flavipennis*, but to be smaller and to have the elytra of a more obscure colour. The unique individual is in poor preservation.

11. **Phlœopora minima.**

Angusta, haud depressa, omnino densissime subtilissimeque punctulata et pubescens, opaca, fuscula, capite nigricante, antennarum basi, pedibus abdominisque apice testaceis; antennis tenuibus, apicem versus crassioribus.
Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ slender, but evidently thicker towards the extremity; third joint remarkably

small and quite slender, the penultimate joints only slightly transverse. Head darker in colour than the rest of the upper surface, distinctly narrower than the thorax; this latter rather slender, about as long as broad, a little narrower than the elytra, without basal impression. Elytra elongate, much longer than the thorax; hind margin not sinuate. Hind body with the seventh segment and the greater part of the sixth yellowish.

This minute insect is readily distinguished amongst its congeners by its slender form and the excessively dense fine punctuation. Only a single specimen has been found.

12. **Phlœopora rufula.**

Angusta, haud depressa, dense subtiliter punctulata et pubescens, opaca, rufula, abdomine ante apicem picescente, ano pedibusque testaceis; capite elytris multo angustiore, antennis haud tenuibus.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ not slender, slightly thicker externally, yellow at the base, rather darker towards the extremity; third joint small, much shorter than the stout second joint, fourth quadrate, fifth to tenth transverse, terminal joint rather short. Head closely punctate, dull, much narrower than the elytra. Thorax a little broader than long, slightly narrower than the elytra, almost straight at the sides, densely and not very finely punctate, finely pubescent. Elytra rather longer than the thorax, scarcely more sparingly and finely punctate. Hind body densely punctate, finely but evidently pubescent.

A very distinct little insect, with comparatively less-depressed form, small head, and coarser punctuation than usual in the genus. Two individuals have been found.

OCALEA.

Ocalea, Erichson, Käf. Mark-Brand. i. p. 298.

This genus consists of about twenty species, all found in the Mediterranean region, with the exception of one in Japan. The insect here assigned to the genus is a very obscure one, and differs from its congeners, inasmuch as the head is almost without constriction behind; but this character is scarcely sufficient to induce at present the generic isolation of *O. dejecta*.

1. **Ocalea dejecta.**

Subdepressa, ferruginea, capite antennisque nigricantibus, harum basi pedibusque testaceis; subtiliter minus crebre punctulata; antennis sat crassis, articulis 5°–10^{m} minus fortiter transversis; prothorace subquadrato, parce punctato, nitidulo.

Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ moderately long and rather stout, evidently thickened towards the extre-

mity, third joint slightly shorter than the second; from the fourth to the tenth each is a little broader than its predecessor, and the first of them is slightly, the last rather strongly transverse; terminal joint stout, obtusely pointed, longer than the two preceding together. Head narrow, much narrower than the thorax, nearly black, shining, sparingly and very obsoletely punctate. Thorax almost as long as broad, but little convex, only slightly curved at the sides, shining, reddish, sparingly punctate. Elytra slightly longer than the thorax, rather closely and finely punctate. Hind body reddish; fourth, fifth, and sixth segments picescent at the base, finely and not closely punctate; second to fifth segments each with a regularly curvate impression at the extreme base.

Two specimens only have been found of this species.

Group **MYRMEDONIINA.**

Anterior tarsi four-, intermediate and posterior five-jointed.

TINOTUS.

Caput haud liberum, absque collo. Prothorax marginibus valde inflexis, occultis. Coxæ intermediæ late distantes, mesosterni processu inter eas longius producto, in medio longitudinaliter carinato, apice lato, rotundato-truncato, sub metasterni processus brevissimi apice producto. Tarsi posteriores modice elongati, articulo basali quam secundus longiore.

The insects of this genus have the facies of small species of *Aleochara*, of the subgenus *Baryodma*, Rey, and agree therewith in the structure of the pieces adjoining the middle acetabula; but their palpi have no definite supplementary terminal joint, and the front feet I think have only four joints: this latter character necessitates the location of the genus in the Myrmedoniina, where, however, it will be quite isolated. The genæ are marginate; the prosternum is very small; and the metathoracic epimera are largely developed, and conspicuous behind the side margins of the elytra.

1. **Tinotus cavicollis.** (Tab. V. fig. 6.)

Haud depressus, dense punctatus, brevissime pubescens, opacus, fusco-niger, antennarum basi, palpis pedibusque testaceis, abdominis apice ferrugineo; prothorace fortiter transverso, transversim convexo, dorso late profundeque depresso, depressione magis evidenter pubescente.

Long. 3 millim.

Hab. GUATEMALA, near the city and at San Gerónimo (*Champion*).

Antennæ rather short and not thick, evidently thickened externally, third joint about as long as the second, fourth as long as broad, fifth scarcely, tenth distinctly transverse; terminal joint not elongate, scarcely so long as the two preceding joints together, obtusely acuminate. Head only about half as broad as the elytra, dull, obscurely punctate. Thorax quite twice as broad as long, curved at the sides, and narrowed in front, the base scarcely sinuate on each side, broadly and deeply depressed along the middle, very finely punctate, the pubescence in the depression more conspicuous than

elsewhere. Elytra slightly longer than the thorax, obscurely rufescent towards the suture, finely punctate, hind margin slightly sinuate at the outer angle. Hind body convex beneath, densely and evenly punctate, dull, the hind part of the sixth segment and the seventh reddish.

Three individuals of this species have been found; they are probably all males, and are remarkable in that the ventral plate of the seventh segment of the hind body is prolonged, and that its broad straight hind margin is densely set with coarse, flat, semi-membranaceous cilia; this plate is smooth and shining. It is possible that the remarkable thoracic depression may prove to be peculiar to this sex.

2. **Tinotus flavescens.**

Haud depressus, sat crebre punctatus, brevissime pubescens, subnitidus, flavo-ferrugineus, antennis, basi excepta, fuscis; prothorace fortiter transverso, transversim valde convexo.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ short and stout, thickened externally; joints five to ten transverse, the last of them strongly so; terminal joint as long as the two preceding together. Elytra short, as long as the thorax, sparingly punctate. Hind body closely punctate, the punctuation of a peculiar strigose nature.

Only one individual has been found. Although possessing quite the same facies as *T. cavicollis*, the species appears to be undoubtedly distinct. Possibly the specimen is a female; at any rate it possesses neither the peculiar ventral structure nor the thoracic impression of *T. cavicollis*.

PHILOTERMES.

Philotermes, Kraatz, Linn. Ent. xi. p. 13 (1857).

This genus consists of three North-American species, which inhabit the nests of Termites; and to these insects I believe I am correct in adding a fourth species from Guatemala, although, as I have never seen any of the North-American species, and as Kraatz has based the genus almost solely on a description of the trophi, this is somewhat doubtful—as is also the location of the genus in the Myrmedoniina, the number of joints of the intermediate tarsus not having been observed or recorded.

1. **Philotermes laxicornis.** (Tab. V. fig. 7.)

Testaceus, elytris obscurioribus, parce pubescens, elytris abdomineque obsolete punctatis; thorace sublævigato, latiore quam elytra, lateribus rotundatis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Las Mercedes 3000 feet (*Champion*).

Antennæ not elongate nor stout, evidently thickened externally, third joint shorter and considerably more slender than the second; fourth joint elongate, a good deal longer than broad, shorter than the third; fifth quite as long as broad, tenth a good

deal shorter than broad; terminal joint stout and rather elongate, quite as long as the two preceding together. Head broad and short, but narrower than the elytra, and much narrower than the thorax. This latter very broad, much broader than the elytra, transversely convex, sides rounded, not narrowed in front, the surface almost impunctate. Elytra not longer than the thorax, rather more obscure in colour than the rest of the surface, very obscurely punctate. Hind body not in the least narrowed till the sixth segment is reached, very obsoletely punctulate.

The three individuals found do not exhibit any sexual characters.

HOMALOTA.

Homalota, Mannerheim, Brachel. p. 73 (1830); Er. Gen. et Spec. Staph. p. 80.

This is an enormous genus, comprising 600 or 700 described species found in various parts of the world, with no doubt a vast number of others still unknown, Europe alone possessing over 200 of these species. They are perhaps the most obscure and difficult of all the forms of Coleoptera to deal with; and although C. J. Thomson and Rey have attempted to divide the genus into a large number of smaller genera, yet their efforts have not proved satisfactory, except in the case of a comparatively few of the better-marked forms. The Central-American species are apparently numerous; and it is probable that the forty-eight here enumerated form in fact only a small proportion of those actually existing in the region. This number, however, is sufficiently large to render it advisable that some grouping should be attempted with a view to facilitate reference. But I regret to say that the attempts I have made to do this are not satisfactory; for the species will not lend themselves to an arrangement such as that used by Kraatz in the 'Insecten Deutschlands,' vol. ii., for the European species, neither will their minute structural differences allow them to be reconciled with the numerous genera and subgenera proposed by C. J. Thomson and by C. Rey. The arrangement adopted is in a vague manner that used by myself for the British species; in it the forms with most elongate antennæ and greatest development of the prothorax are placed first, as being the most highly developed forms of the genus. In the case of a considerable number of species I have indicated structural peculiarities which will, I hope, allow the determination of the species I have described in something like a satisfactory manner by those who may in the future enter on the difficult task of studying these insects; while the comparisons I have made with well known and defined European forms will greatly help any one familiar with these.

1. **Homalota consors.** (Tab.V. fig. 8.)

Nigro-fusca, depressa, parallela, antennis fuscis, basi sordide testacea, pedibus dilute testaceis; subtilissime punctulata; antennis gracilibus, extrorsum haud crassioribus; abdomine crebrius punctato; tarsis brevibus.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Joaquin (*Champion*).

Extremely similar to the European *H. fragilis*, Kr., but with the antennæ rather less slender, although in other respects similarly formed. Head elongate, impressed on the middle. Thorax about as long as broad, very slightly narrowed behind, very finely punctate. Elytra much longer than the thorax, very finely punctate. Hind body with the basal segments closely punctate, the penultimate one more sparingly. As in the allied European forms, the antennæ are quite destitute of exserted setæ.

The male has the hind margin of the last dorsal plate obscurely serrate.

2. **Homalota consimilis.**

Nigro-fusca, depressa, parallela, antennis fuscis, pedibus testaceis; subtilissime punctulata; antennis gracilibus, extrorsum haud crassioribus; abdomine crebre punctato; tarsis brevibus.

Long. 3–3¼ millim.

Hab. GUATEMALA, Senahu, Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Closely allied to *H. consors*, but of larger size. Of the depressed, subparallel form and fragile make of *H. cambrica*, Woll., but with the articulations of the antennæ a little longer than in the latter species; the penultimate joints of these organs are a good deal longer than broad. Head depressed in front. Thorax subquadrate, being as long as broad, but slightly narrowed behind. Elytra much longer than the thorax, excessively closely and finely, almost invisibly, punctate. Hind body closely punctate, the penultimate segment only sparingly punctate.

Only a single individual has been found in each locality; one of them I believe to be a male, as the last dorsal plate is truncate in the middle.

3. **Homalota dissimilis.**

Nigro-fusca, pedibus testaceis, haud depressa, pube brevissima dense vestita, vix visibiliter punctulata, subopaca; antennis crassiusculis, articulis nullis transversis; capite thoraceque angustulis, hoc ad angulos anteriores omnino rotundato.

Long. 3½ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Intermediate in appearance between the species of *Gnypeta* and the European *Homalota pavens*, Er., and *H. gregaria*, Er. Antennæ rather stout, dark in colour; second and third joints elongate and rather stout, about equal; tenth about as long as broad; terminal joint nearly equal in length to the two preceding together. Head greatly narrower than the elytra, narrowed behind. Thorax a good deal narrower than the elytra, nearly as long as broad, very slightly narowed behind, broadly but indistinctly impressed along the middle. Elytra a good deal longer than the thorax, very finely and densely punctate. Hind body rather broad and short, indistinctly punctulate; the second, third, fourth, and fifth dorsal plates at their extreme bases each with a peculiar, excessively fine and indistinct, coriaceous or subreticulate sculpture.

In this species the middle coxæ are by no means contiguous, the metasternum is a good deal produced between the middle coxæ, and the mesosternum is also prolonged to about a similar length; the apices of the two processes are not, however, contiguous, but are separated by a rather elongate, narrow intercoxal isthmus. The insect may prove entitled to generic rank on account of its more than usually prolonged metasternal process and the rather less approximate coxæ; and by these characters, as well as somewhat by the form and sculpture, an affinity with *Tachyusa* is suggested: the hind tarsi, however, are rather stout and only of moderate length, the basal joint slightly longer than the following one. The middle tarsi are undoubtedly five-jointed. Only a single individual has been found; it is in a bad state of preservation, and apparently a female.

4. **Homalota centralis.**

Nigra, capite thoraceque vix subænescentibus, antennis pedibusque fusco-testaceis, elytris fuscis; antennis gracilibus, articulis penultimis haud transversis; prothorace subquadrato, sparsim punctato; elytris hoc longioribus, parce punctatis; abdomine segmentis 2°–4^{m} parcius punctatis, 5° et 6° fere lævigatis.
Long. 4½ millim.

Hab. GUATEMALA, Totonicapam 8000 to 10,500 feet (*Champion*).

Antennæ slender, strongly setose; third joint a little longer than second; fifth to ninth each very slightly broader than its predecessor, the ninth longer than broad (terminal joints broken off). Thorax rather narrower than the elytra, a little broader than long, nearly straight at the sides, but a good deal narrowed and rounded near the front angles, the hind angles obtuse, the surface sparingly punctured.

This species is of rather narrower form than *H. alticola*, and has joints five to nine of the antennæ more slender and elongate, and the thorax less transverse. It was apparently found by Mr. Champion in the same locality as *H. alticola*, and was supposed by him to be the same species. But it is undoubtedly distinct; for, in addition to the differences above indicated, the middle coxæ are a little more approximate, so that the mesosternal process is rather narrower. A single mutilated individual, in bad condition, is all that has been found.

5. **Homalota alticola.**

Nigra, subnitida, capite thoraceque vix subænescentibus, elytris fuscis; antennis subgracilibus, apicem versus paulo latioribus, articulis penultimis leviter transversis; prothorace transversim subquadrato, crebre punctulato; elytris prothorace longioribus, crebrius punctatis; abdomine segmentis 2°–4^{m} sparsim, 5° et 6° adhuc sparsius punctatis; pedibus sordide testaceis.
Long. 4½ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ black, conspicuously setose, third joint a little longer than second, fourth a good deal longer than broad, tenth slightly transverse. Head rather broad and short, sparingly punctate, but little shining. Thorax broad, but a good deal narrower than

the elytra, much broader than long, nearly straight at the sides, scarcely narrowed behind, finely punctate; hind angles obtuse, not rounded. Elytra a good deal longer than the thorax, rather closely punctate. Legs sordid testaceous, femora a little darker.

This species has quite the appearance of the European species forming the *H. xanthoptera* group, and is allied in structure to *H. incognita*, Shp.; but the middle coxæ are perceptibly less approximate, and the mesosternal process is more elongate and less slender, and therefore less acuminate at the extremity. A single individual has been found; it is possibly a female.

6. **Homalota libera.**

Nigra, capite thoraceque subænescentibus, elytris fusco-subæneis, antennarum basi pedibusque testaceis; antennis sat elongatis, conspicue pilosellis, articulo quarto haud, decimo leviter, transverso; thorace transversim subquadrato; elytris thoracis longitudine; abdomine parce punctato.
Long. 4 millim.

Hab. GUATEMALA, Volcan de Agua 8500 to 10,500 feet (*Champion*).

Antennæ yellow at the base, becoming dark at the extremity; third joint elongate, longer than second; fourth slender, longer than broad; of joints five to ten each is a little shorter and broader than its predecessor, so that, though the fifth is longer than broad, the tenth is transverse; terminal joint elongate and acuminate, quite as long as the two preceding together. Thorax rather large, but not so long as broad; it is slightly narrowed behind; the hind angles are very obtuse, the base is about as broad as the elytra at the shoulders; it is sparingly punctate. Elytra rather short, about the length of the thorax, a little narrowed towards the shoulders, sparingly punctate; hind margin not perceptibly sinuate at the outer angle. Hind body only very sparingly punctate; the apical segments almost without punctuation.

The middle coxæ are in this species very exserted, so that the structure of the pieces near them is not very conspicuous; the coxæ are nearly or quite contiguous, and the mesosternum is scarcely at all produced between them; and thus, although the mesosternum sends off between them a long slender process, it does not reach the metasternum, but is separated from it by a considerable space. Only a single individual, in extremely decayed condition, has been sent.

7. **Homalota guatemalæ.**

Rufo-obscura, capite, elytris abdomineque in medio fuscis, antennis rufis, pedibus abdominisque apice testaceis; dense subtilissime punctulata, fere opaca; capite subtriangulari; antennis mediocribus articulis 4°–10^m^, transversis.
Long. 2 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ rather short, moderately stout; third joint short, not so long as second; fourth smaller than those following, transverse; fifth to tenth differing but little from

one another, each short and distinctly transverse; terminal joint rather large, fully as long as the two preceding together. Head rather narrower than the thorax, distinctly narrowed in front; eyes small. Thorax rather strongly transverse, without channel or depression. Elytra a little longer than the thorax. Hind body becoming rather broader from the base to the fifth segment; all the segments extremely finely and densely punctulate. Legs short, yellow.

This little insect is very similar in form and punctuation to the European *H. analis*, Grav., and has a coloration resembling that of the brightest varieties of the European species; *H. guatemalæ*, however, has the antennæ much stouter and with a larger terminal joint. Only one specimen has been found.

8. **Homalota vexata.**

Fusca, antennarum basi pedibusque flavis, prothorace elytrisque testaceis; antennis parum elongatis, sat crassis; prothorace fortiter transverso; abdomine subparallelo, sparsim punctato.
Long. $2\frac{1}{8}$ millim.

Hab. GUATEMALA, El Reposo 800 feet (*Champion*).

Antennæ with the second and third joints short and subequal in length; from the fourth to the tenth each is slightly broader than its predecessor, and each is transverse; the terminal joint broad, and about as long as the two preceding together. Head nearly black, short and broad. Prothorax strongly transverse, about as broad as the elytra, very obsoletely punctate. Elytra short, a little longer than the thorax, very finely, moderately closely punctate. Hind body nearly black, only very sparingly punctate.

One of the most obscure species, and of very doubtful position; the intermediate coxæ are not quite contiguous. Only two specimens have been found.

9. **Homalota carinata.**

Nigro-fusca, parum nitida, pedibus testaceis; antennis brevibus, sat crassis, articulis 4°–10^{m} fortiter transversis; prothorace fortiter transverso, latiore quam elytra; abdomine crebre punctato.
Long. $2\frac{3}{4}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Basal joint of antennæ fuscous, the others darker; third joint short, a good deal shorter than the second; of joints four to ten each is slightly broader than its predecessor, the first of them slightly, the last of them strongly transverse; terminal joint stout, obtuse. Thorax rather broader than the elytra, much rounded at the sides, the hind angles indistinct, the surface closely and somewhat roughly punctate. Elytra short, but distinctly longer than the thorax, moderately closely and rather roughly punctured, hind margin much sinuate externally. Hind body rather slender, not narrowed till the fifth segment is reached; all the segments distinctly punctured, but

the fifth and sixth not so closely as those preceding them. Legs yellow, rather short and stout.

This is a very isolated species; the intermediate coxæ are contiguous for a small part of their length behind, and the mesosternal process between them is elongate and is raised along the middle; the space between the middle and hind coxæ is very small. Only one individual, in very fragile condition, has been found.

10. **Homalota pectoralis.**

Minuta, fusca, parum nitida, dense subtilius punctulata, antennarum basi pedibusque testaceis; antennis brevibus, apicem versus fortiter incrassatis; prothorace fortiter transverso, elytris quam hic multo longioribus; abdomine parallelo, crebrius (segmentis 5° et 6° sparsius) punctato.

Long. 1½ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ quite short, third joint short and small, only half as long as the second; fourth joint quite small, but not so long as broad; the following joints very short, the ninth and tenth very strongly transverse, the terminal joint stout and rounded. Head small. Prothorax strongly transverse, about twice as broad as long, very finely punctulate. Elytra very greatly longer than the thorax, very finely punctulate. Legs clear yellow.

This is one of the smallest species; and its small size and short antennæ, and other points, give it some approximation of facies to the species of the genus *Oligota*. Only a single specimen has been found.

The middle coxæ are rather less contiguous than in the ordinary forms of *Homalota*; and the metasternum is much produced between them; the mesosternal process is therefore not very elongate, although it very nearly, or perhaps quite, meets the metasternum.

11. **Homalota evanescens.**

Depressa, angustula, parallela, subtilissime punctulata, haud setulosa, fulvo-testacea, capite abdomineque ante apicem fuscis; antennis crassiusculis, brevibus, articulis penultimis fortiter transversis.

Long. 1⅝ millim.

Hab. GUATEMALA, Guatemala city, San Gerónimo (*Champion*).

A very minute insect, similar to the European *H. exilis*, Er. The antennæ are stout and very short; the third joint is quite small, almost triangular, not much more than half as long as the second; fourth to tenth each very short, each a little broader than its predecessor; eleventh joint not acuminate, large in proportion to the others. Head subquadrate, almost invisibly punctulate. Thorax transverse, but little narrower than the elytra, straight at the sides, almost impunctate, without channel or impression. Elytra rather elongate, very finely punctate. Hind body parallel, extremely finely punctulate, fifth segment nearly black.

The series of ten specimens referred by me to this species shows so much variation

that it is doubtful whether all may be truly one species. The head is in some a little narrowed in front; and the antennæ vary somewhat in thickness, and in the colour of their apical portion, which is sometimes clear yellow, sometimes infuscate; the dark band on the abdomen is sometimes definite and nearly limited to the fifth segment, but in other cases is indefinite and darkens slightly the hind body nearly to the base.

12. **Homalota longifrons.**

Depressa, parallela, subtilissime punctulata, subnitida, fusco-testacea, capite abdomineque fuscis, pedibus testaceis; capite oblongo, anterius impresso; antennis brevibus, articulis penultimis transversis.
Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, Guatemala city and San Gerónimo (*Champion*).

One of the most minute insects of the family. Antennæ very short; the basal joints testaceous, the others more or less infuscate; third joint quite small; fourth to tenth transverse, each broader than its predecessor; terminal joint rounded, not large. Head oblong, deeply impressed in front. Thorax not broader than the head, rather elongate, but not quite so long as broad, straight at the sides, but the base a good deal rounded, depressed along the middle, punctuation almost invisible. Elytra longer than the thorax. Hind body narrow, almost broader at the fifth segment than at the base, punctuation invisible. Legs short, yellow.

Five individuals of this mite have been found. Though similar in many points to *H. evanescens*, it is abundantly distinct.

13. **Homalota diffinis.**

Nigro-fusca, antennarum basi pedibusque fuscis; antennis mediocribus, articulis nullis transversis; prothorace subquadrato, sparsim punctato; elytris crebrius parum subtiliter punctatis, quam prothorax longioribus; abdomine apicem versus subattenuato, sparsim punctato.
Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

Antennæ rather elongate, but little thickened externally, the two basal joints sordid red, the rest nearly black; second and third joints rather elongate, the latter very slightly the longer; fourth joint rather small, not transverse; fifth to tenth differing very little from one another, each about as long as broad; terminal joint of moderate length, not quite so long as the two preceding together. Thorax a good deal narrower than the elytra, nearly as long as broad, nearly straight at the sides, hind angles not rounded. Elytra rather longer than the thorax, more closely punctate than the rest of the upper surface. Hind body shining, with the basal three segments sparingly, the two following still more sparingly punctate. Legs infuscate yellow, the femora darker, the tibiæ without porrect seta on their middle.

Two individuals, in bad condition. The species has a very ordinary appearance, and, indeed, extremely resembles *H. chiriquensis*; but it has the middle coxæ more than

usually separated, and the mesosternal process is comparatively broad, and its extremity is rounded and quite distinct. I think its best position at present would be in the *H. xanthoptera* group.

14. **Homalota semiobscura.**

Parum elongata, nigro-fusca, elytris fusco-testaceis, antennarum basi pedibusque sordide testaceis; antennis parum elongatis, sat crassis, articulis penultimis leviter transversis; prothorace transverso; abdomine apicem versus subattenuato, subtiliter parum crebre punctato.
Long. 2 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ slightly thicker externally; third joint rather short, shorter than second; fourth about as long as broad, it and the two or three following joints scarcely at all different from one another, the tenth slightly transverse; terminal joint rather large, as long as the two preceding together. Head subcircular, a good deal narrower than the elytra. Thorax rather strongly transverse, the base a good deal rounded, the sides behind but little rounded, at the front angles much deflexed, the surface very finely and indistinctly punctate. Elytra longer than the thorax, finely punctate. Hind body rather short, its punctuation fine, sparing, and indistinct.

This obscure insect resembles in size and form the European *H. atrata*, Man.; but the hind body is less punctate; the intermediate coxæ, though approximate, are not quite contiguous. Only one individual has been found.

15. **Homalota spergula.**

Nigerrima, pedibus fuscis; antennis minoribus, extrorsum haud incrassatis, articulis 4°–10^{m} leviter transversis; prothorace transverso; elytris abdomineque crebre fortiter punctatis.
Long. 2 millim.

Hab. GUATEMALA, San Gerónimo 3000 feet (*Champion*).

Antennæ small and not incrassate externally, third joint shorter than second; fourth small, almost or quite as long as broad; fifth to tenth short, transverse, but not strongly so, terminal joint not large. Thorax rather strongly transverse, rounded at the sides, not much rounded at the base, and not narrowed in front. Elytra small, longer than the thorax, roughly punctured. Hind body parallel, all the segments with a rather rough punctuation, exserted setæ very insignificant. Legs dilute blackish or smoky, short, middle and hind tibiæ each bearing an exserted seta.

This insect is very similar to the European *H. nigra*, but is a little smaller, and has the elytra and hind body more roughly punctate. Only a single individual, badly preserved, has been found; it is possibly a male, the hind margin of the seventh dorsal plate being truncate. The middle coxæ are distinctly separated, though the interval between them is not great.

16. **Homalota despecta.**

Depressa, subparallela, subglabra, nigra, nitida, pedibus fuscis; antennis parvulis, tenuibus, articulis 5°–10^{m} leviter transversis; subtilissime punctulata.
Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ short and slender, slightly thickened externally, entirely black; third joint rather short, much shorter than second, fourth quadrate, fifth to tenth transverse. Thorax transverse, about as broad as the elytra, shining, without impressions, excessively minutely, indeed scarcely visibly punctulate. Elytra longer than the thorax, slightly more dilute in colour than the other parts, shining, very finely punctulate. Hind body rather broad, not acuminate, excessively finely punctulate, the apical segments almost impunctate. Legs fuscous.

This species is very similar to the European *H. nigra*; but the individuals are apparently a little smaller and almost destitute of pubescence and setæ, and the antennæ are smaller; the middle coxæ are contiguous. The two individuals described are in very bad condition.

17. **Homalota colorata.**

Rufo-testacea, antennis (basi excepta), capite abdominisque segmento 5° fuscis, elytris fusco-testaceis, basi testacea; antennis mediocribus, articulis 4°–10^{m} transversis; prothorace valde transverso, subtiliter punctulato, basi in medio obsolete impressa; abdomine subparallelo, parum punctato, nitidulo.
Long. 3 millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ rather short, third joint hardly so long as second; fourth distinctly but not greatly smaller than those following, rather shorter than long; fifth to tenth not greatly differing from one another, rather strongly transverse; terminal joint rather large, acuminate. Head broad. Thorax strongly transverse, nearly twice as broad as long, but yet very evidently narrower than the elytra, rather sparingly and indistinctly punctate. Elytra a good deal longer than the thorax, rather closely and finely punctate. Hind body with the basal segments only very sparingly punctate.

The intermediate coxæ are not quite contiguous, but are separated by a rather short and slender process of the mesosternum; the metasternum is moderately produced in front; but the points of the two processes are separated by a considerable space. The species may be placed near *H. scapularis*, Sahl. Only a single specimen has been found.

18. **Homalota heterocera.**

Nigra, pedibus læte testaceis, elytris sordide testaceis, ad latera paulo obscurioribus; antennis majusculis, articulo quarto parvo, transverso, quam articulus quintus duplo breviore, sequentibus leviter transversis

subæqualibus; prothorace transversim subquadrato, cumque elytris crebre subasperato-punctatis; abdomine apicem versus subattenuato, crebre et fortiter (apicem versus parcius) punctato.
Long. $2\frac{1}{2}$–3 millim.

Hab. GUATEMALA, San Gerónimo, Guatemala city, Capetillo and San Joaquin in Vera Paz (*Champion*).

This species is similar to the European *H. longicornis*, Grav., but is smaller and has less elongate antennæ. These organs are large and black, the basal joint being a little marked with yellow, the second and third joints subequal, the fourth a little narrower than the fifth but much shorter than it; the fifth to tenth subequal, each subquadrate, being only a little narrower at the base than at the apex, the fifth slightly longer than those following, which are distinctly transverse. Head very obtuse in front. Thorax longer than broad, straight at the sides, hind angles obtuse; surface rather shining, with a fine but rather rough punctuation. Elytra a good deal longer than the thorax, with similar punctuation to it. Hind body shining, rather roughly punctate and setose; the basal three segments closely punctate, the following more sparingly.

In the male the seventh dorsal plate has, behind, four short widely separated teeth; the two central ones are very short and obtuse, and separated by a gently curved emargination; the lateral ones scarcely project further back than the central ones, but are longer, because the incision between them and the central teeth is deeper.

According to a note of Mr. Champion's, this species is found in dung in the mountains. It can be readily distinguished from its allies by the comparatively small fourth joint of the antennæ. Its appearance and superficial characters are intermediate between those of the European *H. longicornis* and *H. cinnamoptera*, Th.; the mesosternal process, however, is less elongate than in those species, and the metasternal one is rather more elongate; the two processes are separated by an intercoxal isthmus of about the same length as in the European insects above named; but this is placed more in front; there is a very short and fine longitudinal carina on the front of the mesosternum in the middle.

19. **Homalota cognata.**

Nigra, pedibus elytrisque testaceis; antennis elongatis, articulis 4°–10^{m} haud transversis; prothorace transversim subquadrato, cumque elytris crebre punctatis; abdomine apicem versus angustato, basi sparsim, apice adhuc parcius punctato.
Long. $2\frac{1}{2}$–3 millim.

Hab. GUATEMALA, San Gerónimo, Capetillo (*Champion*); NICARAGUA, Chontales (*Janson*).

Fourth joint of antennæ elongate, longer than broad, about equal to the following joint; fifth to tenth similar to one another in length, each scarcely broader than its predecessor, the fifth longer than broad, tenth about as long as broad; terminal joint rather elongate, equal to the two preceding together. Thorax not strongly transverse,

slightly narrower than the elytra, these pale yellow, rather closely punctate. Hind body a good deal narrowed to the apex, only sparing punctate. Legs clear yellow.

In the male the hind margin of the seventh dorsal plate is prominent in the middle, and slightly emarginate, and at each side externally there is a very short tooth.

Found in company with *H. heterocera* in dung on the mountains. The species should be placed near *H. longicornis*, Grav. Although superficially very similar to *H. heterocera*, it is abundantly distinct by the structure of the fourth joint of the antennæ and the less punctate hind body. The male characters are slightly different, the lateral tooth being less prominent; the sternal structure is also a little different, the middle coxæ being less approximate, and the mesosternal process consequently broader with distinctly truncate extremity. There is almost no carination of the mesosternum in the middle in front.

Mr. Champion has sent four individuals; but the exponent from Nicaragua is unique.

20. **Homalota leucoptera.**

Nigra, antennarum basi, pedibus elytrisque testaceis; antennis elongatis, articulis 4°–10ᵐ haud transversis; prothorace transversim subquadrato, cumque elytris crebre punctatis; abdomine apicem versus subattenuato, crebre punctato.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo, Guatemala city, San Gerónimo (*Champion*); PANAMA, David (*Champion*).

Third joint of antennæ elongate, considerably longer than the second; fourth evidently smaller than those adjoining, but longer than broad; fifth to tenth differing but little from one another, each longer than broad; terminal joint elongate. Thorax not strongly transverse, but a little broader than long, base very little rounded; hind angles obtuse, not rounded. Elytra a little longer than the thorax, pale yellow. Hind body rather elongate, rather closely punctate, the apical segments a little more sparingly than the basal, these latter usually a little paler in colour.

In the male the apical segment terminates in four short, obscure teeth.

This species is closely allied to *H. heterocera* and *H. cognata*, but differs from the former by the more elongate antennæ with pale base and longer fourth joint, and from *H. cognata* by the pale base to the antennæ and by the much less sparingly punctate hind body. The sternal structure is similar to that of *H. cognata*; but the mesosternum is less indistinctly carinate in front.

The individuals from Panama are immature, but appear to be rather smaller and a little more finely punctate than those from Guatemala above described.

21. **Homalota perdita.**

Fusca, antennarum basi, pedibus elytrisque testaceis, prothorace brunneo, abdomine brunneo-fusco, segmento 6°

dimidio apicali pallidiore; antennis crassiusculis, articulis penultimis subtransversis; prothorace transverso; abdomine subparallelo, crebre punctato.
Long. 3 millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, El Reposo 800 feet, San Isidro 1600 feet, Guatemala city (*Champion*); NICARAGUA, Chontales (*Janson*).

Antennæ rather stout, of moderate length, scarcely thicker externally, the basal two or three joints yellow, the rest dark; third joint as long as second; fourth about as long as broad, a little shorter and narrower than those following; fifth about as long as broad; tenth slightly transverse; terminal joint large, as long as the two preceding together. Head short and broad, nearly black. Thorax greatly broader than long, nearly straight at the sides, the base a little rounded, the hind angles distinct, obtuse, the surface very finely and not closely punctate. Elytra yellow, rather longer than the thorax, very finely punctate. Hind body with segments two to five rather closely punctate, sixth more sparingly. Legs pale yellow.

Only a single individual has been sent from each of the five localities. Although similar in appearance to *H. heterocera*, the species is, with the following one, rather isolated, and of doubtful position, the mesosternal process being comparatively short and not slender, with obtuse extremity.

22. **Homalota sallæi.**

Fusca, antennarum basi, pedibus elytrisque testaceis, his extrorsum ad apicem fuscis; antennis parum elongatis, crassiusculis, articulis 4°–10^{m} transversis; prothorace fortiter transverso; abdomine subparallelo, basi parce punctato.
Long. $2\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

This species is very similar to *H. perdita*, and agrees with it in the sternal structure, but differs by the shorter joints of the antennæ and the sparingly punctured hind body. The second and third joints of the antennæ are short, and are subequal in length; joints four to ten each a little broader than its predecessor, the first of them hardly so long as broad, the last of them strongly transverse, terminal joint large. The hind body is very sparingly punctate, even on the basal segments.

The unique individual described is a male; the hind margin of the seventh dorsal plate is bituberculate in the middle, and the outside of each tubercle is armed with a slender rather elongate tooth.

23. **Homalota terminicornis.** (Tab. V. fig. 9.)

Fusca, antennarum basi apiceque pedibusque testaceis, elytris fusco-testaceis, humeris testaceis; antennis crassiusculis, articulis penultimis leviter transversis; abdomine subparallelo, segmentis basalibus crebre, 5° et 6° parcius punctatis.
Long. $2\frac{3}{4}$–3 millim.

Hab. GUATEMALA, El Reposo 800 feet, San Isidro 1600 feet, Carrizal (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Buguba 800 to 1500 feet (*Champion*).

Antennæ rather stout, of moderate length, scarcely thicker at the extremity; the basal two or three joints yellow, the following dark, the apical one again yellow; third joint slightly longer than second, fourth and fifth each as long as broad; terminal joint rather large, as long as the two preceding together. Thorax strongly transverse, rather closely punctate. Elytra closely and finely punctate.

In the male the seventh dorsal plate is at the extremity slightly prolonged in the middle, each side of the prolonged portion is at the hind margin obscurely tuberculate, and between the tubercles there is a very slight emargination; on each side there is also a short tooth, which scarcely projects so far back as the central prominence.

In this species the middle coxæ are moderately separated, and the mesosternal process is rather short and broad, with obtuse extremity, very similar to the same parts in *H. perdita*.

24. **Homalota chiriquensis.**

Nigro-fusca, elytris fuscis, pedibus testaceis; antennis mediocribus evidenter pilosellis, articulis penultimis subquadratis; prothorace leviter transverso, antrorsum subangustato, basi rotundata, parce obsoleteque punctato; elytris quam hic longioribus, crebre punctatis; abdomine apicem versus attenuato, sparsim punctato, nitido, apice obscure piceo.

Long. $4\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

Antennæ rather elongate, basal joint piceous, the others black; third joint elongate, longer than second; fourth quadrate, a good deal smaller than the fifth; fifth to tenth differing little from one another, but each slightly shorter than its predecessor, the fifth longer than broad, the tenth not quite so long as broad; terminal joint acuminate, as long as the two preceding together. Head small. Thorax distinctly broader than long, a little narrowed in front and curved at the sides, with the base much rounded, and the hind angles extremely indistinct. Elytra a good deal longer than the thorax, of an obscure brownish colour, rather closely punctate. Hind body slender, very sparingly punctate. Legs yellow; middle and hind tibiæ with a rather elongate outstanding seta on the middle of each; tarsi rather elongate.

In this species the middle coxæ are very approximate, and the mesosternal process is elongate and extremely slender; the coxal cavities communicate by a well-marked rather elongate intercoxal isthmus. It is similar to the European *H. intermedia*, Th.; but the hind body is less punctate.

Only two individuals, in bad condition, have been found.

25. **Homalota certata.**

Nigra, elytris fuscis, antennarum basi pedibusque testaceis; antennis fere gracilibus, apicem versus incrassatis, articulis penultimis leviter transversis; prothorace transverso, parce punctato; abdomine apicem versus subattenuato, segmentis basalibus parce punctatis.

Long. 3 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Four basal joints of antennæ yellow, the first three elongate; the third slender, nearly equal in length to the second; fourth small, as long as broad; fifth to tenth each slightly broader than its predecessor, the first of them longer than broad, the last rather broader than long; terminal joint stout, obtusely pointed, about as long as the two preceding together. Head rather broad and short, but much narrower than the elytra. Thorax a little narrower than the elytra, strongly transverse, the sides but little, the base a good deal rounded, hind angles indistinct, the surface sparingly and obsoletely but not finely punctate. Elytra a good deal longer than the thorax, rather finely and not densely punctate. The three basal segments of the hind body sparingly punctate, the others almost impunctate.

The middle coxæ are distinctly separated; the mesosternal process between them, however, is not elongate, and has a pointed extremity; the metasternum is but little produced between them, and is consequently separated by a considerable length from the point of the mesosternal process. According to the appearance of the species and the structure of the antennæ, one would suppose it intermediate between *H. sodalis*, Er., and *H. fungi*, Grav.; but the mesosternal process is much shorter than in those species. Only one individual has been found.

26. **Homalota sobrina.**

Gracilis, nigra, elytris fuscis, antennarum basi pedibusque testaceis; antennis haud gracilibus, articulis penultimis leviter transversis; prothorace transverso, crebrius subtilissime punctato; abdomine apicem versus subattenuato, segmentis basalibus parce punctatis.

Long. $2\frac{3}{4}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ not elongate, moderately stout, the two or three basal joints fuscous yellow; third joint scarcely shorter than second, fourth quadrate, fifth to tenth similar to one another in length, each just perceptibly broader than its predecessor, the first of them about as long as broad, the last distinctly transverse; terminal joint stout, obtusely pointed, hardly as long as the two preceding together. Thorax slightly broader than the elytra, strongly transverse, nearly straight at the sides, but slightly narrowed and rounded at the front angles, the surface closely and extremely finely punctate. Elytra slightly longer than the thorax, of a fuscous testaceous colour, closely and finely punctate. Basal segments of hind body very sparingly and indistinctly punctate, and the penultimate segments even more sparingly.

Although apparently agreeing structurally with *H. certata*, this species is readily distinguished by its stouter antennæ and differently punctate thorax and elytra. Only a single individual has been found.

27. **Homalota sordidula.**

Homalota sordidula, Er. Käf. Mark-Brand. i. p. 335; Gen. et Spec. Staph. p. 123[1].

Hab. Europe[1].—Guatemala, San Gerónimo (*Champion*).

Mr. Champion has found a series of eight specimens; and I am unable to distinguish them from others of this common European species.

28. **Homalota pumila.**

Inter minimas, anterius et posterius attenuata, nigra; elytris fuscis, pedibus testaceis; dense subtiliter punctata.
Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Guatemala city, San Gerónimo, Capetillo (*Champion*).

Antennæ of moderate length, but little thickened externally; third joint rather short, shorter than second; fourth about as long as broad; the penultimate joints distinctly transverse. Thorax rather strongly transverse, distinctly narrowed in front, much rounded at the base, hind angles very indistinct. Elytra longer than the thorax, and rather paler in colour. Hind body pointed behind, densely punctate.

This obscure and minute insect is closely allied to *H. sordidula*, but is slightly larger, and has the hind body more attenuate behind. A series of ten specimens has been found.

29. **Homalota jugicola.**

Nigro-subænea, subnitida, parcius pubescens, tibiis fuscis, tarsis fusco-testaceis; antennis fere gracilibus, apicem versus leviter incrassatis; abdomine parce punctato.
Long. 3 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ even at the base black, slender at the base, distinctly thicker at the extremity; second and third joints subequal, fourth rather longer than fifth, tenth distinctly transverse. Thorax a little narrower than the elytra, rounded at the sides and base, hind angles extremely obtuse, surface sparingly punctate. Elytra a good deal longer than the thorax, rather closely and finely punctate.

In the male the hind margin of the seventh ventral plate forms two obtuse prominences in the middle, and on each side terminates as a slender acute tooth which does not project quite so far back as the middle projections.

The resemblance of this insect to the more brassy-coloured individuals of the European *H. atramentaria*, Gyll., is extreme; but the Guatemalan species has different male characters. A series of about twenty individuals was found.

30. **Homalota montium.**

Nigro-subænea, elytris fuscis, pedibus fusco-testaceis; antennis mediocribus, apicem versus leviter incrassatis; elytris crebrius, abdomine parce punctato.
Long. $3\frac{1}{4}$–4 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Very closely allied to *H. jugicola*; but the individuals are of rather larger size,

have the thorax larger and less transverse, the elytra of a different colour and more closely punctate, and the legs paler. The male characters are apparently similar in the two species.

This was probably found in company with *H. jugicola*, as the two were mixed indiscriminately on the cards on which they were mounted by Mr. Champion; six individuals of *H. montium* have been examined.

31. **Homalota mundula.**

Nigra, nitida, parcius punctata et pubescens, pedibus sordide testaceis, femoribus basique antennarum fuscis; antennis parum elongatis, articulis 5°–10^{m} leviter transversis; prothorace fortiter transverso.
Long. $2\frac{5}{8}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10500 feet (*Champion*).

Antennæ black, sordid yellow at the base, rather short, moderately stout; third joint hardly so long as second; fourth distinctly smaller than the following, hardly so long as broad; fifth to tenth transverse, the first of them being slightly, the last decidedly broader than long. Head short and broad, rather shining, almost impunctate. Thorax scarcely narrower than the elytra, strongly transverse; hind angles acute, very sparingly and indistinctly punctate. Elytra rather sparingly and finely punctate, fuscous black in colour. Hind body at the base very sparingly punctate, at the apex almost impunctate.

The unique individual of this species was perhaps found in company with *H. jugicola*, as it was mounted on the same card as a specimen of that species. *H. mundula*, though similar to *H. jugicola*, is undoubtedly distinct, is apparently of smaller size, blacker colour, and with more shining less punctate surface, and shorter and stouter antennæ.

32. **Homalota hirtiventris.**

Anterius et posterius attenuata, parum depressa, fusco-ferruginea, prothorace abdomineque basi et apice vage dilutioribus, antennis, basi excepta, nigricantibus, pedibus testaceis; prothorace parum punctato; abdomine crebre punctato, apicem versus crebrius longiusque setuloso.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Coatepeque 1300 feet, El Tumbador 2500 feet (*Champion*).

Antennæ slender, of moderate length, not thickened externally, third joint elongate; rather longer than second, fourth a little smaller than those following; fifth to tenth similar to one another, and each about as long as broad; terminal joint elongate, acuminate. Head narrow, only about half as broad as the elytra. Thorax transverse, but not strongly so, a good deal rounded at the base, not much rounded at the sides, a little narrowed at the front angles, of an obscure ferruginous colour. Elytra about as long as the thorax, rather closely punctate. Hind body much narrowed behind, somewhat roughly punctate, the apical segments scarcely more sparingly than those at the base, the pubescence conspicuous, and the exserted setæ towards the extremity

numerous and elongate, the basal segments paler than those following, and the apex again paler. Legs yellow; intermediate and posterior tibiæ with a well-marked exserted seta on the middle of each.

This species may be placed near *H. aterrima*. Four individuals have been found.

33. **Homalota quæsticula.**

Anterius et posterius attenuata, nigra, elytris pedibusque testaceis, illis sordidis; antennis sat elongatis, basi fusca; crebre subtilissime punctata, prothorace parum transverso.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ rather elongate and not slender; third joint rather long, but not slender, subequal to second; fourth to tenth differing little from one another, the first of them as long as broad, but the last a little transverse; terminal joint elongate, as long as the two preceding together. Thorax transverse but not strongly so, rounded at the base, a good deal narrowed towards the front, very finely and indistinctly punctate and delicately pubescent. Elytra slightly longer than the thorax, of an obscure yellow colour, closely and finely punctulate. Hind body much acuminate behind, closely and very finely punctate.

This species is similar to *H. macrocera*, Th.; but the antennæ are not quite so elongate, and the punctuation is not so dense. Only a single individual has been found.

34. **Homalota thoracica.**

Nigro-fusca, thorace elytrisque dilutioribus, antennarum basi pedibusque testaceis; gracilis, subtiliter punctata, subopaca, abdomine nitidiore; antennis mediocribus, apicem versus incrassatis, articulis penultimis transversis; prothorace transverso, basi utrinque vix subsinuata, angulis posterioribus fere rectis; abdomine parce punctato.
Long. 3 millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ rather short, and only moderately stout, third joint nearly as long as second, fourth to tenth each slightly broader than its predecessor, the fourth small, the tenth distinctly transverse; terminal joint rather large, quite as long as the two preceding together, slightly paler in colour. Head broad and short, dull, very obscurely punctate. Thorax strongly transverse, the sides more rounded in front than behind, the hind angles unusually distinct, nearly rectangular, but a little obtuse, the surface closely and very finely punctate. Elytra longer than the thorax, very finely and closely punctate. Hind body slender, but little punctate, the basal segments rather less sparingly than the others.

In this species the middle coxæ are slightly separated by an elongate, very slender process of the mesosternum that very nearly meets the slightly produced metasternum. The species is somewhat similar in form to *H. anceps*, but is very different structurally. Only a single individual has been found.

35. **Homalota flavicauda.** (Tab. V. fig. 10.)

Ferrugineo-testacea, parum nitida, minus tenuiter pubescens, abdomine setulis exsertis parcis nigris, prothorace valde transverso, basi utrinque versus angulum posteriorem subsinuato; elytris quam prothorax multo longioribus, crebre punctatis; abdomine apicem versus attenuato, crebre æqualiter punctato.

Long. $3\frac{1}{4}$ millim.

Hab. Guatemala, Senahu in Vera Paz (*Champion*).

Antennæ not elongate, a good deal thickened towards the apex; third joint shorter than second, fifth to tenth differing little from one another in length, but each a little broader than its predecessor, tenth slightly transverse, terminal joint as long as the two preceding together. Head very short and broad, scarcely visibly punctate. Thorax very transverse, more than twice as broad as it is long, rather narrower at the anterior than at the posterior angles, at the latter as broad as the shoulders of the elytra, the base rounded and very distinctly margined, on each side near the posterior angles a little sinuate, so that the angles are visible although obtuse; the surface extremely finely punctate. Elytra much longer than the thorax, and more distinctly punctate and pubescent. Hind body with the apical segment pale yellow, all the segments equally punctate.

The species is a peculiar one, and makes some approximation in form and appearance to *Oxypoda* and *Polylobus*; but I can place it nowhere but in *Homalota*. The anterior tarsi are pretty certainly only four-jointed, the middle and posterior having each five joints, the basal joint of the latter scarcely longer than the second; the fourth and fifth joints are very slender, and the division between them obscure. The intermediate coxæ are not quite contiguous; and the mesosternal process is greatly prolonged between them as a very slender process, which meets the slightly produced middle of the metasternum; the middle and posterior tibiæ each bear externally a conspicuous exserted seta placed above the middle. Only a single individual has been found.

36. **Homalota brevis.**

Homalota brevis, Sharp, Trans. Ent. Soc. Lond. 1876, p. 62[1].

Hab. Panama, Bugaba (*Champion*).—South America, Amazons[1].

Mr. Champion has found only one individual of this minute insect; but I believe it is conspecific with those found by Prof. Trail at Garrao in fungus.

37. **Homalota læticula.**

Minuta, subparallela, subtiliter punctata et pubescens, testacea; antennis parvis, articulis 5°–10ᵐ transversis; prothorace fortiter transverso, transversim convexo, basi et lateribus rotundatis, antrorsum angustato; abdomine parce punctato.

Long. $1\frac{3}{4}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ quite short and not stout, a little thickened outwardly; third joint much

shorter than second, fourth subquadrate; fifth to tenth transverse, the last of them strongly so; terminal joint rather large. Head small. Prothorax strongly transverse, finely and rather closely punctate and pubescent. Elytra longer than the thorax, rather more distinctly and less closely punctate. Hind body concolorous with the anterior parts, the fifth and sixth segments slightly darker; it is indistinctly punctate, the apical segments more sparingly than the basal ones. Legs rather short.

This is an *Oxypoda*-like insect, differing in colour and appearance from any of our European *Homalotæ*. Only two individuals, in very fragile condition, have been found; and I have not succeeded in getting a clear sight of the sternal structure; but it appears to me that the middle coxæ are very nearly contiguous, but are separated by a very slender and elongate process of the mesosternum.

38. **Homalota annulata.**

Minuta, testacea, capite abdominisque segmento quinto nigricantibus; antennis fuscis, basi testacea, brevibus, crassiusculis, articulis 5°–10^{m} fortiter transversis; prothorace convexo, fortiter transverso, subtilissime punctato; abdomine apicem versus attenuato, basi crebre, apice sparsim punctato.
Long. 2 millim.

Hab. GUATEMALA, Guatemala city (*Champion*).

Antennæ short and stout, a good deal thickened externally, the three basal joints testaceous, the others infuscate; third joint much shorter than second; fourth to tenth similar to one another in length, but each broader than its predecessor, the first of them slightly, the last of them strongly transverse; terminal joint rather large. Head small, blackish. Thorax very convex and strongly transverse, much rounded at the base, distinctly narrowed in front, bright yellow, very finely punctulate. Elytra slightly longer than the thorax, closely and finely punctate, of a yellow colour, a little infuscate at the base, especially near the scutellum. Hind body pointed behind, rather strongly setose about the apex, of a yellow colour, with the fifth segment nearly black, the four basal segments rather closely punctate, the following more sparingly. Legs clear yellow.

In this species the middle coxæ apparently quite touch one another about the middle of their length. Although similar in style of colour and appearance to *H. læticula*, it is very doubtful whether the two will prove to be really closely allied. Only two specimens of *H. annulata* have been found.

39. **Homalota longipennis.**

Scutello occulto, elytris elongatis; fusca, antennis basi, pedibus (sæpiusque ano) testaceis; parce punctata, tenuissime pubescens; antennis apicem versus crassioribus, articulis penultimis transversis.
Long. 2 millim.

Hab. MEXICO, Guanajuato (*Sallé*).

Antennæ not elongate, a good deal thickened externally; the four or five basal joints yellow, the others obscure. Head small, narrowed behind the eyes. Thorax very

strongly transverse, rounded at the sides and base, the hind angles very indistinct, the surface almost impunctate. Elytra broader and greatly longer than the thorax, sparingly and very indistinctly punctate. Hind body slender, parallel, almost impunctate.

In this species the middle coxæ are quite contiguous and their cavities confluent, the meso- and metasternal processes being widely separate, and the latter very short. The insect will probably form a distinct genus; but I prefer to treat it as a *Homalota*, of which genus, as at present defined, it has the systematic characters.

40. **Homalota mollis.**

Scutello occulto, elytris sat elongatis; minuta, rufo-testacea, pectore antennisque extrorsum obscuris; abdomine in medio nigricante; subtilissime haud dense punctata; antennis brevibus, articulis 5°–10ᵐ transversis.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Guatemala city (*Champion*).

This species appears to be closely allied to *H. longipennis*; but the individuals are much smaller, of different colour, and with much shorter antennæ. These organs are much thickened externally; the third joint is small, the fourth very small, fifth to tenth each quite short, and the last of them strongly transverse. The punctuation of the surface is very indistinct, but is not so scanty as in *H. longipennis*.

Three specimens have been found.

41. **Homalota discrepans.**

Breviuscula, subdepressa, nitida, parce punctulata subtiliterque pubescens, fuscula, antennarum basi, capite, thorace, abdominis basi pedibusque dilute testaceis, elytris fusco-testaceis; antennis brevibus, extrorsum incrassatis, prothorace omnino fortiter transverso.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo 3000 feet (*Champion*).

Antennæ quite short, much thickened outwardly; the six basal joints yellow, the five apical blackish; third joint short, greatly shorter than the second; fourth transverse, tenth very strongly transverse; terminal joint stout, only moderately long. Head broad, but much narrower than the thorax, yellow, shining, impunctate. Thorax clear yellow, very short and broad, but distinctly narrower than the elytra, shining and almost impunctate. Elytra elongate, nearly twice as long as the thorax, yellow, much tinctured with black, sparingly punctate. Hind body blackish, the apex more dilute, and the base yellow, rather sparingly punctate.

This minute insect has rather the appearance of a *Gyrophæna* or of an *Oligota* than of *Homalota*; but I have been able to see distinctly that the front tarsi are 4-, the middle and hinder 5-jointed; and as the middle coxæ are but little distant, it must be placed at present in *Homalota*.

Six specimens have been found; but most of them are in fragments, having been attacked by *Acari* during their journey to this country.

42. **Homalota basiventris.**

Breviuscula, subdepressa, subtilius punctulata, et pubescens, fusca, antennarum abdominisque basibus pedibusque testaceis; antennis brevibus, apicem versus fortiter incrassatis; prothorace fortiter transverso, basi rotundata; abdomine parce punctato.

Long. $1\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui, between 2500 and 4000 feet (*Champion*).

This minute insect has somewhat the appearance of a species of *Oligota*. The antennæ are very short and very much thickened externally; the three or four basal joints are yellow, the others dusky; second joint short and stout; third joint slender at the base, thickened outwardly, much shorter than the second; fourth and following joints very short, each strongly transverse; terminal joint rather short, with obtuse apex. Head much narrower than the thorax, this latter quite twice as broad as long, strongly rounded at the base and also at the short sides, feebly punctate. Elytra a good deal longer than the thorax, feebly and not densely punctate. Hind body finely and not densely punctate, the basal segments yellowish.

The unique individual appears to indicate a species allied to *H. discrepans* and its neighbours, but with short, thick antennæ.

43. **Homalota championi.** (Tab. V. fig. 11.)

Elongata, crebrius punctata, haud nitida, capite, pectore abdomineque late ante apicem nigris; thorace abdomineque basi et apice rufo-testaceis; antennis fuscis, basi cum pedibus testaceis; elytris fusco-testaceis.

Long. $3–3\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo, Carrizal, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ rather long, but little thickened towards the extremity; third joint elongate, rather longer than the second; fifth to tenth differing but little from one another, the first of them as long as broad, the last of them rather broader than long; terminal joint obtuse, as long as the two preceding together, a little paler at the tip. Head rather small, short and broad, rounded behind the eyes, dull, scarcely visibly punctate. Thorax not quite so long as broad, nearly straight at the sides, and scarcely narrowed behind, very finely punctate and closely pubescent. Elytra longer than the thorax, closely and distinctly punctured. Hind body rather elongate, subparallel; the two basal segments yellowish red, the following two and a half segments black, the extremity again brightly coloured; segments two to four are rather closely, five and six more sparingly punctate. Legs clear yellow.

In the male the dorsal plate of the sixth ventral segment bears numerous irregularly placed raised granules, some of them very small, others elongate and linear; the hind margin of the seventh plate is prominent in the middle, and emarginate so as to form

two well-marked obtuse angles, and a similar short angular projection is seen on each side.

The species is not closely allied to any other; the middle coxæ are rather more than usually widely separated, and the mesosternum and metasternum are each a good deal produced between them; but their extremities are separated by a somewhat elongate well-marked intercoxal isthmus; the apex of the mesosternal process, although narrow, is truncate, not pointed; the genæ are apparently quite immarginate. Although the species is not very well placed in *Homalota*, yet the characters are not very different, and scarcely justify the formation of a new genus.

44. **Homalota godmani.** (Tab. V. fig. 12.)

Elongata, opacula, densius punctulata, nigra, pedibus, antennarum basi elytrorumque humeris testaceis; abdomine rufo, ante apicem late nigricante; prothorace transversim subquadrato.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Senahu in Vera Paz, Paso Antonio 400 feet (*Champion*).

This species is closely allied to *H. championi*, but differs by the colour of the thorax, and has, moreover, the head a little broader, the thorax slightly more transverse. The male characters, and also the structure of the middle coxal cavities, seem to be similar in the two species.

Three specimens of *H. godmani* have been found.

45. **Homalota rufiventris.**

Sat elongata, opacula, subtilissime punctulata, nigra, antennarum basi pedibusque testaceis, elytris brunneo-testaceis; abdomine rufo-testaceo, ante apicem nigro-cingulato; prothorace transverso.
Long. vix 3 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ rather elongate, slightly thickened towards the extremity; third joint equal to the second; fourth a good deal smaller than fifth, about as long as broad, fifth also about as long as broad, tenth evidently transverse; terminal joint rather elongate and stout, obtuse at apex. Head and thorax dull, with a dense, almost invisible, punctuation, the latter strongly transverse, slightly narrowed behind, somewhat depressed along the middle. Elytra much longer than the thorax. Hind body parallel, segments second and third bright red, fourth segment infuscate red, fifth black, sixth and seventh yellowish; the three basal segments closely punctate, the following quite sparingly. Legs yellow, not elongate.

Although presenting a resemblance of general appearance to *H. championi* and *H. godmani*, this insect is quite distinct from them; the mesosternal and metasternal processes quite meet, so that the middle coxal cavities are completed internally and are rather widely separated; the mesosternal process is short and broad with truncate

extremity; and the completion of the cavities is due to the greater prolongation forwards of the metasternal process. The genæ are apparently immarginate.

A single individual, unfortunately in bad preservation, is all I have seen; it presents no external mark indicative of sex.

46. **Homalota trisignata.** (Tab. V. fig. 13.)

Subopaca, subtilissime punctata et pubescens, variegata; antennarum basi, prothorace, elytrorum humeris, abdomine ex parte pedibusque testaceis; capite, elytris ex parte, abdominis maculis et cingulo, pectoreque nigricantibus; prothorace transverso, plus minusve discrete fusco-trisignato.

Long. 3 millim.

Hab. GUATEMALA, Balheu in Vera Paz (*Champion*).

Antennæ of moderate length, distinctly thickened outwardly; the four or five basal joints pale yellow, the others gradually a little darker; third joint about equal to second, fourth about as long as broad, seventh to tenth transverse; terminal joint rather large, longer than the two following together. Head blackish, dull, sparingly and finely punctate. Thorax strongly transverse, nearly straight at the sides, slightly narrowed behind, closely and extremely finely punctate, with a longitudinal dark mark on the middle and a smaller mark on each side. Elytra longer than the thorax, black on the suture at the base, a very large black mark at the outer angle, and a band of yellow colour extending obliquely from the shoulder to the suture. Hind body yellow, with the basal segments marked with black in the middle and slightly spotted at the sides; the fifth segment entirely black, the apex of the last segment infuscate; the basal segments are sparingly punctate, the apical ones nearly impunctate.

The four individuals vary a little in the extent and definition of the dark marks. The middle coxæ are rather widely separated; the mesosternal process is of moderate length, not slender, with rounded extremity, separated from the moderately long metasternal process by a rather elongate intercoxal isthmus. The anterior tarsi are pretty certainly only four-jointed; although under a moderate power of the compound microscope there is an appearance of the division of the fourth joint, yet I believe that, as in the case of *Leptonia*, this appearance will prove to be illusory.

I am not able to see well the seventh ventral segment; but in the male the dorsal plate of the sixth segment has an obscure elevated granule in the middle, near the hind margin, and I believe the hind margin of the following segment is quadridentate.

47. **Homalota cingulifera.**

Parum elongata, subopaca, subtiliter punctulata, nigro testaceoque variegata, antennis basi testaceis, extrorsum obscuris; prothorace transverso, posterius angustato; abdomine segmentis 2°–5^{m} sat crebre punctatis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ not elongate, rather slender, but little thicker externally; second joint

short, not so long as the third; fourth as long as broad, eighth to tenth slightly transverse; terminal joint elongate and acuminate. Head rather short and broad, black, very indistinctly punctate. Thorax strongly transverse, a little narrowed behind, with extremely indistinct hind angles, clear yellow in colour, closely and finely punctate. Elytra longer than the thorax, of a dilute black colour, yellow at the base, closely punctate. Hind body yellow, with the fifth segment entirely and the fourth in part black, and the extremity dilute black. Legs clear yellow.

This species has a little approximation in appearance to the species of *Gyrophæna*. As in *H. trisignata* the middle coxæ are moderately separated; but in *H. cingulifera* the apex of the prosternal process is truncate, and the intercoxal isthmus shorter. The legs mounted in Canada balsam show clearly that the anterior tarsi are four-, the middle five-jointed.

Six specimens, all in very bad preservation, have been examined. The male has the hind margin of the seventh dorsal plate prominent in the middle; the prominent portion is not very broad, is a little emarginate, and from each of its angles there proceeds forwards a raised straight line; on each side of this central prominence there is a rather deep curved emargination, the outside of the plate terminating in a sharp spine.

48. **Homalota prolixa.** (Tab. V. fig. 14.)

Elongata, angustula, perdepressa, rufescens, capite, elytris abdomineque ante apicem fuscis; antennis brevibus; capite exserto, suboblongo, abdomine crebre punctato.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ quite short, pale red; second joint short, third small, considerably smaller than the second, fourth to tenth rather strongly transverse; terminal joint stout, short, and obtuse. Head straight at the sides, the eyes not large, the surface coarsely but subobsoletely punctate. Thorax subquadrate, as long as broad, quite straight at the sides, depressed along the middle, feebly punctate. Elytra elongate, moderately closely, extremely finely punctate. Hind body slender at the base, becoming a little broader towards the extremity; the segments rather deeply transversely impressed at the base.

This minute insect apparently possesses the characters assigned by Rey to his genus *Thectura*, the middle coxæ being contiguous throughout their length and the genæ immarginate; the joints of the tarsi I am unable to count. Only a single individual has been found.

LEPTOGLOSSA.

Leptoglossa, Solsky, Bull. Mosc. xiii. p. 260.

This genus was proposed by Solsky in a rather informal manner for a Mexican insect; and he at the same time stated that it was congeneric with the Chilian *Homalota lævi-ventris*, Fauv.; indeed the characters of the new genus appear to have been chiefly

drawn from the Chilian insect. The Mexican insect remains unknown to me, and also to M. Fauvel; but the latter authority considers the genus a valid one, so far, at any rate, as its Chilian exponents are concerned.

1. **Leptoglossa puberula.**

Homalota puberula, Solsky, Bull. Mosc. xiii. p. 259[1].

Hab. Mexico (*Boucard*[1]).

Described from a unique individual, whose habitat is not known more precisely.

LEPTONIA.

Coxæ intermediæ sat late distantes; processus mesosternalis inter eas parum productus, apice lato, rotundato-truncato. Genæ obsoletissime marginatæ. Tarsi posteriores graciles, elongati, tibiis breviores, articulis quatuor basalibus subæqualibus, articulo primo quam secundus vix longiore, articulo quinto quam quartus duplo longiore.

I have established this genus for an insect which tends to connect *Myrmedonia*, *Thamiaræa*, and *Homalota*; it differs from the former genus by the structure of the hind tarsi, and from *Thamiaræa* and *Homalota* by the more widely separated middle coxæ, with short, broad mesosternal lobe. *Calodera syntheta*, Sharp, should belong to it: when describing that insect (Trans. Ent. Soc. Lond. 1876, p. 59) I stated that the anterior tarsi were five-jointed; and such is apparently the case; but I have mounted an anterior leg of *Leptonia picta* in Canada balsam, and it is then evident that the appearance of division of the terminal joint is illusory, and the front tarsi are certainly only four-jointed, the terminal joint being very long, considerably longer, in fact, than the other three together, while the middle and hind feet possess really five joints.

1. **Leptonia picta.** (Tab. V. fig. 15.)

Gracilis, antennis laxe articulatis, articulo ultimo perelongato; capite thoraceque nigro-submetallescentibus, hoc sat fortiter punctato, transversim subquadrato; elytris fuscis basi testaceis; abdomine apicem versus subacuminato, nigro-testaceo variegato, parum punctato, nitidulo.

Long. 3–4½ millim.

Hab. Mexico, Cordova (*Sallé*); British Honduras, Belize (*Blancaneaux*); Guatemala, Cerro Zunil 4000 to 5000 feet and San Gerónimo (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba and Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ elongate, rather slender, the four basal joints yellow, the others darker; third joint elongate and slender, rather longer than second; fourth joint twice as long as broad, tenth about long as broad; terminal joint remarkably elongate, as long as the three preceding together. Head a good deal narrower than the thorax, rounded behind the large eyes, only very obscurely punctate. Thorax not quite so long as broad, a little narrowed behind and sinuate near the hind angles, which are distinct

and obtuse, the surface rather closely covered with a fine granular punctuation, and with an obscure basal impression before the scutellum. Elytra rather longer than the thorax, rather closely punctate. Hind body with the second and third segments bright yellow, usually spotted with black in the middle; fourth, fifth, and sixth segments black, the hind margin of the sixth and the base of the seventh yellowish, the extreme apex again blackish. Legs elongate, pale clear yellow.

This species appears to be variable, perhaps according to locality; but the varieties appear not to be sharply separated; the individuals from Honduras are small, and have the thorax shorter, with the hind angles less distinct, and the basal segments of the hind body quite immaculate. I do not observe any sexual distinctions.

THAMIARÆA.

Thamiaræa, C. J. Thomson, Öfv. Vet. Ak. Förh. 1858, p. 35; Mulsant et Rey, Hist. Nat. Col. Fr. Brév., Myrmédoniaires, p. 147.

This genus was established for three European species; and Fauvel has recently added one or two others from New Guinea. It is differentiated from *Homalota* chiefly by the greater distance separating the middle coxæ; and I have therefore felt justified in assigning to it the following three species discovered by Mr. Champion, although their appearance is far from similar to their European congeners.

1. **Thamiaræa salvini.** (Tab. V. fig. 16.)

Variegata; capite thoraceque æneis, parce punctatis, nitidis; elytris fuscis, humeris testaceis, crebre punctatis; abdomine nigro testaceoque variegato, fere impunctato; antennis obscuris basi cum pedibus testaceis, articulo ultimo perelongato.

Long. $4\frac{1}{2}$–5 millim.

Hab. Panama, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ rather elongate; third joint elongate, rather longer than second, fourth joint rather longer than broad, tenth not so long as broad; terminal joint very elongate, as long as the three preceding together, acuminate. Thorax a good deal narrower than the elytra, broader than long, nearly straight at the sides, hind angles very obtuse, the surface indistinctly and very sparingly punctate. Elytra longer than the thorax, of a fuscous colour, with a pale mark at the shoulder, closely and distinctly punctate. Hind body rather pointed behind, almost impunctate, segments second and third yellow, spotted with black in the middle; fourth, fifth, and sixth black, the hind margin of the latter and also the seventh segment yellow. Legs clear yellow.

In the male the hind margin of the seventh dorsal plate has a minute emargination in the middle, and on each side of this is slightly tuberculate or thickened; on each side the segment is much cut out, and laterally there is an elongate obtuse tooth projecting quite as far back as the middle portion.

This insect has a very great resemblance to *Leptonia picta*. The two species appear

to have been found together; at least I suppose so from the way in which the specimens were mixed together when the collections came to me.

2. Thamiaræa cognata.

Variegata, capite thoraceque fusco-æneis, parce punctatis, nitidis; elytris fuscis, humeris testaceis, crebre punctatis; abdomine nigro, basi testacea nigro-maculata, fere impunctato; antennis obscuris, basi cum pedibus testaceis, articulo ultimo perelongato.
Long. 4 millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

Head and thorax of an obscure reddish colour, tinged with æneous; apex of hind body pitchy, not abruptly paler than the preceding segments; apex of seventh ventral plate in the middle broadly truncate and quite straight; on each side of this it is cut away, and at the outer angle is a stout tooth projecting slightly further back than the middle part. In other respects very similar to *T. salvini*.

Although very similar to *T. salvini*, this species is undoubtedly distinct; for, in addition to the characters above mentioned, there are some differences in the structure of the breast, the mesosternal process being not quite so elongate, so that it is separated by a greater space from the produced apex of the metasternum. Only one specimen has been found.

3. Thamiaræa variegata.

Rufo-testacea, capite et abdomine late ante apicem nigricantibus, hoc basi nigro-maculata; antennis fuscis, basi cum pedibus testaceis; elytris extrorsum fuscescentibus; thorace transverso, fere impunctato; antennis sat elongatis, articulo ultimo perelongato.
Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Antennæ with the fifth joint about as long as broad, the following joints transverse, the terminal joint as long as the three preceding together. Thorax strongly transverse, of a reddish colour. Elytra closely punctate, testaceous, broadly infuscate externally. Hind body almost impunctate.

This insect is apparently closely allied to *T. salvini*, but is smaller, with less elongate antennæ and differently coloured thorax. The unique specimen is in such a condition that it is not advisable to unmount it to ascertain if the structural characters beneath are quite the same as in *T. salvini*.

MYRMEDONIA.

Myrmedonia, Erichson, Käf. Mark-Brand. i. p. 286; Gen. et Sp. Staph. p. 35.

This genus, as at present accepted, is a polymorphic one. It was established by Erichson on characters drawn chiefly from the parts of the mouth; and he assigned to it, only with hesitation, the majority of the South-American species known to him.

Since then the genus has received a large addition of Oriental (many of them Termitophilous) species from Kraatz; and lately the European portion of the genus has been divided by Mulsant and Rey to form several distinct genera. The characters used by these latter authors are drawn chiefly from the tarsi and sternal pieces; and to apply their system to the extra-European species would involve a complete revision of the genus and its dismemberment into a considerable number of genera. This is a task that cannot at present be accomplished by me; and I have therefore followed a similar course to that of Erichson by referring the Central-American species to the same genus as the European and Oriental forms, thus disregarding the very different facies of many of the New-world species. In all these forms the middle coxæ are widely separated, the mesosternum being very little produced between them, and possessing a rounded extremity which is separated by a well-marked interval from the corresponding metasternal process, the posterior tarsi are elongate and slender, the basal joint markedly longer than the second, which, however, is itself elongate. These characters will bring the Amazonian *Tachyusa extranea* and *T. picticornis*, Sharp, and *Homalota culpa*, Sharp, into the genus. The greater number of the Central-American species have a Homalotoid facies; I entertain great doubt as to what their mode of life may be. I scarcely suppose that many of them will prove Myrmecophilous or Termitophilous, as is the case with most of the Old-world species ascribed to the genus.

1. **Myrmedonia fauveli.**

Gracilis, testacea, nitida, capite thoraceque rufis, elytris dilute fuscis, basi margineque apicali testaceis, abdomine fusco-signato; capite thorace elytrisque parcius subtilissime punctulatis, abdomine lævigato.

Long. $3\frac{1}{2}$ millim.

Hab. North America, United States.—Mexico, Jalapa (*Höge*).

Antennæ elongate, testaceous, the penultimate joint about as long as broad, the eleventh equal in length to the two preceding together. Head red, almost impunctate. Thorax but little transverse, slightly narrowed behind, red and shining, sparingly and extremely indistinctly punctulate, quite without basal impression. Elytra but little longer than the thorax, of a brownish colour, with the apical margin and the base pale; they are extremely indistinctly punctulate, yet their punctuation and pubescence are a little more distinct than those of the other parts of the upper surface. Hind body yellow, the segments marked at the sides with fuscous or black, the larger part of the dorsal plate of the fourth segment nearly black, the fifth and sixth fuscous. Legs clear yellow. Under surface yellow, the breast infuscate across the middle, and the ventral plates more or less definitely dark transversely.

I received some specimens of this species from M. Fauvel some years ago as being the *Myrmedonia labida* of Erichson. The latter species, however, is found in Venezuela; and although it is no doubt a species closely allied to *M. fauveli*, yet I think it is clear, from Erichson's description, that it is different. The only specimen of *H. fauveli* that

I have seen, besides those sent me by M. Fauvel, is an individual found by Höge; it agrees exactly with the North-American examples.

2. **Myrmedonia flavicornis.** (Tab. V. fig. 17.)

Myrmedonia flavicornis, Solsky, Bull. Mosc. xlii. p. 258[1].

Hab. Mexico[1], Jalapa (*Flohr and Höge*), Cordova (*Sallé*); Guatemala, Guatemala city and San Gerónimo, El Reposo 800 feet (*Champion*); Nicaragua, Chontales (*Janson*).

This species varies a good deal in colour, the head and thorax being sometimes fuscous, sometimes nearly red; the yellow marks on the hind body vary greatly in extent. The species is very closely allied to *M. fauveli*, and the pale individuals are extremely similar to that species; but *M. flavicornis* is rather larger, and has the antennæ rather stouter towards the apex, so that the penultimate joint is a little transverse; and the middle and hind femora are always broadly infuscate towards the extremity.

Although the species is rather widely distributed, the individuals that have been found are but few in number.

3. **Myrmedonia confinis.**

Gracilis, fusca, nitidula, antennis extrorsum, pedibus, elytrorum humero et margine apicali abdominisque segmentis basalibus postice testaceis; capite, thorace elytrisque parce subtilius punctulatis, abdomine lævigato.

Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Paso Antonio 400 feet (*Champion*).

Antennæ dark at the base, becoming yellow towards the extremity, a good deal thickened outwardly, the penultimate three joints very decidedly transverse.

This species is very closely allied to *M. flavicornis*; but the colour is more obscure, and the base of the antennæ is dark, and the terminal joints of the antennæ are less elongate. The punctuation of the head, thorax, and elytra is rather less indistinct. I have seen four individuals, in very decayed condition.

4. **Myrmedonia setigera.**

Testacea, nitidula, parcius subtilissime punctulata, setulis erectis nigris minus parce munita, elytris fuscis humeris margineque apicali testaceis; abdomine fusco, segmentis basalibus testaceo marginatis.

Long. $3\frac{1}{4}$ millim.

Hab. Guatemala, Zapote (*Champion*).

Antennæ elongate, compact, third joint conspicuously longer than second, penultimate about as long as broad. Head very short and transverse. Thorax rather strongly transverse, not much narrowed behind. Elytra but little longer than the thorax.

This species, though very similar to *M. flavicollis* and *M. fauveli*, will be readily distinguished by the rather more elongate third joint of the antennæ, by the short head, and especially by the rather numerous erect setæ at the sides of the thorax, elytra, and hind body. Only a single individual has been found.

5. **Myrmedonia brevicollis.**

Fusca, pedibus, antennarum et elytrorum basibus abdominisque segmentis secundo tertioque testaceis; capite, thorace elytrisque parce subtilius punctulatis, abdomine lævigato; prothorace fortiter transverso.
Long. 3 millim.

Hab. Nicaragua, Chontales (*Janson*).

Antennæ rather elongate, a little thickened towards the apex, the three basal joints pale yellow, the others dark, the terminal joint, however, paler than the preceding, obscure red, the penultimate joints transverse. The thorax is nearly twice as broad as it is long; it is narrower than the elytra, and distinctly narrowed behind. The elytra are short, but a good deal longer than the thorax, of a fuscous colour, largely pale at the shoulder, very feebly punctate. The basal segments of the hind body are yellow, the others being nearly black. Legs entirely pale yellow.

This species has quite the appearance of a species of *Homalota*. The mesosternum is scarcely at all produced backwards; but its termination is difficult to perceive, owing to its raised margin being extremely obsolete; the broad intercoxal isthmus is rather shorter than it is in *M. fauveli*, owing to the metasternal process being rather more prolonged in front. The insect appears to a certain extent intermediate between *M. fauveli* and its allies and the following species. I have seen only a single example.

6. **Myrmedonia diluta.**

Testacea, nitidula, parce subtilius punctulata, elytris abdomineque versus apicem subinfuscatis; capite thoraceque fortiter transversis.
Long. 4 millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ elongate, distinctly thickened towards the apex, not very compact, rather strongly setigerous, second and third joints subequal, tenth transverse; terminal joint large, fully as large as the two preceding together. Head short and broad, quite sparingly punctate. Thorax strongly transverse, but a little narrower than the elytra, a little narrowed behind, sparingly and feebly punctulate; elytra a little longer than the thorax, of a pale yellowish-brown colour, with a large indefinite paler mark at the shoulder, feebly punctulate. Hind body impunctate, the basal segments yellow, the others brownish. Legs clear yellow.

The species is allied to the following rather than to those previously described, the metasternum being greatly produced between the middle coxæ, so as to leave only a short broad isthmus between itself and the broadly rounded, scarcely produced middle

of the mesosternum. In respect of this structure these insects approximate greatly to the subgenus *Zyras* of Rey, from which, however, by their small stature and Homalotoid form, they are profoundly different.

Only a single individual, in bad preservation, of *M. diluta* is before me; the lobes of the maxillæ are very elongate, and the maxillary palpi very slender in it.

7. **Myrmedonia laxicornis.**

Pallide fusca, antennis nigris, harum basi, pedibus, elytrorum humeris abdomineque basi testaceis, femoribus intermediis et posterioribus extrorsum fuscis; prothorace fortiter transverso, parce subtiliter punctato; elytris quam hic paulo longioribus, vix crebrius punctatis, abdomine supra lævigato.

Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

Antennæ rather elongate and stout, third joint slightly longer than the second, tenth slightly transverse; terminal joint large, longer than the two preceding together. Thorax much broader than long, a little narrower than the elytra, only slightly narrowed behind. Elytra a little longer than the thorax, of a brownish or fuscous-cinnamon colour, paler at the base externally. Hind body with the two basal segments yellow, each marked transversely at the base with dark colour, the other segments pitchy.

In this species the intercoxal process of the metasternum is much produced forwards; it is therefore a little less distant from the mesosternum than it is in *M. fauveli* and in *M. flavicornis*. The appearance is greatly that of the species of *Homalota*.

8. **Myrmedonia fragilis.**

Brunneo-testacea, antennarum basi, pedibus abdomineque testaceis, hoc segmentis 2°–4ᵐ ad basin transversim fusco signatis; prothorace transverso, obsolete punctato, basi ante scutellum subimpressa; elytris quam prothorax longioribus et latioribus, crebre subtilissime punctatis; abdomine supra lævigato.

Long. $4\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 6000 feet (*Champion*).

Antennæ elongate, laxly articulate, third joint a good deal longer than second; joints four to ten each of similar length, but each a little broader than its predecessor, the tenth about as long as broad; eleventh elongate, longer than the two preceding together. Thorax transverse, distinctly narrowed behind, very indistinctly punctate, the hind angles obtuse but not rounded. Elytra longer and broader than the thorax, rather closely and very finely punctate. Legs very elongate.

This is a very Homalotoid species, and in form resembles *M. homalotoides*, but is different in colour. The individuals are apparently considerably larger than those of *M. laxicornis*; and the antennæ have the joints rather more elongate. The only two individuals I have seen are in extremely decayed condition; one of them has the antennæ nearly black, and the abdominal segments towards the apex darker; although

this may be the result of decay, or of a different condition of maturity, it leaves some doubt whether the two individuals are certainly one species.

9. Myrmedonia plebeia.

Pallide fusca, antennis nigris, harum basi, pedibus, elytrorum humeris abdomineque basi testaceis, femoribus posterioribus extrorsum fuscis; prothorace fortiter transverso, parce subtiliter punctato; elytris quam hic paulo longioribus, vix crebrius punctatis, abdomine supra lævigato.

Long. vix 3 millim.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

Quite similar to *M. laxicornis*, but smaller, and with the thorax still more strongly transverse, and the antennæ a little shorter, so that the penultimate joint is distinctly transverse.

In the male the dorsal plate of the terminal segment is truncate and obscurely crenulate, and the outer angles are very slightly more prominent.

Six individuals of this species have been found. They are apparently all rather immature; and the femora vary a little in colour, probably in consequence of this.

10. Myrmedonia filicornis.

Fusca, antennis pedibusque testaceis, abdomine nigro; sat crebre subtiliter punctulata, ad latera setis exsertis conspicuis, abdomine supra lævigato.

Long. circiter $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Aceituno (*Champion*).

Antennæ elongate and slender, very little thickened towards the extremity, entirely yellow; third joint slightly longer than second, tenth longer than broad; terminal joint very elongate, quite as long as the two preceding together. Head short and broad, rather convex, feebly punctulate, shining. Thorax strongly transverse, but little narrowed behind, the hind angles rounded, the surface rather convex, finely punctulate, towards the sides with conspicuous erect black setæ. Elytra longer than the thorax, fuscous, with an indistinct yellow spot at the shoulder, very finely and rather closely punctulate, with conspicuous lateral setæ. Hind body black, shining, impunctate. Legs very slender, yellow.

This species, of which I have only a single badly preserved individual for examination, is remarkable by the elongate slender antennæ, which also become but little thickened outwardly. The metasternal process is much produced between the middle legs, but is rather ill-defined, owing to its raised margin being extremely fine; the intercoxal isthmus is slightly longer than it is in *M. laxicornis*. The aspect of the species is different from the other *Myrmedoniæ* here described, and approximates to that of the group of *Homalotæ* containing *H. fungi*.

11. Myrmedonia homalotoides.

Antennis laxe articulatis, nigris, basi fusco-testacea; capite thoraceque nigro-subænescentibus, hoc fortiter

transverso, crebre punctato; elytris fusco-brunneis, crebre punctatis; abdomine lævigato, nigro, segmentis basalibus ad margines posteriores apiceque dilutioribus; pedibus testaceis.
Long. 4 millim.

Hab. GUATEMALA, Chiacam, Purula, San Gerónimo (*Champion*).

Antennæ elongate, thickened towards the extremity, laxly articulated and conspicuously setose, the basal joint sordid yellow, the rest nearly black; third joint slightly longer than second, tenth a little shorter than long; terminal joint large, quite as large as the two preceding together, its apex obscurely red. Head broad and short, very sparingly punctate. Thorax narrower than the elytra, strongly transverse, a little narrowed behind. Elytra longer than the thorax, rather closely punctate. Legs elongate and slender, entirely yellow.

The species has a great resemblance to the European species of *Homalota* of the *H. socialis*, Er., group; but has the distant middle coxæ and the elongate hind tarsi of *Myrmedonia*; the hind tarsus, indeed, is very long and slender, the basal joint being the longest and about twice as long as the second joint, and considerably longer than the terminal joint.

Described from three individuals, two of which are in very bad condition; the third, from San Gerónimo, has some minute points of distinction from the other two, and may be a distinct species.

12. **Myrmedonia lævior.** (Tab. V. fig. 18.)

Nigra, nitidula, elytris pedibusque testaceis, illis ad angulos posteriores, his femoribus fuscis; antennis apicem versus subincrassatis, articulis nullis transversis; prothorace nitidulo, parcius punctato; elytris vix perspicue punctatis, tenuius pubescentibus; abdomine sparsim punctato.
Long. 4 millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ becoming very slightly narrower from the fourth joint to the termination, second and third joints equal, tenth about as long as broad; eleventh elongate, rather longer than the two preceding together. Head narrow, shining, and almost impunctate. Thorax distinctly narrower than the elytra, not at all narrowed behind, indeed just perceptibly narrower in front than at the base, nearly as long as broad, shining, very sparingly punctate, with four rather larger but not very distinct punctures placed so as to indicate the angles of a square on the disk. Elytra pallid, infuscate at the sides externally, with a very indistinct sculpture formed apparently by excessively obscure remote granules. Hind body very sparingly punctate.

The male has a slight tubercular elevation on the dorsal plate of the sixth segment, in the middle, just in front of the hind margin; the hind margin of the following plate is very indistinctly crenulate.

This insect resembles extremely the European *Homalota nitidula*, Kraatz; and until

I had examined its structural characters I anticipated it would prove very closely allied thereto; but the structure of the sternal pieces and the hind tarsi require that it should at present be located in the genus *Myrmedonia*. Four individuals have been found.

13. **Myrmedonia docilis.**

Testacea, capite, elytris abdomineque fuscis, hoc basi elytrisque marginibus basalibus et apicalibus testaceis; capite, thorace elytrisque dense subtilissime punctulatis, abdomine lævigato; antennis articulis 7°–10^{m} transversis.

Long. 3 millim.

Hab. GUATEMALA, Guatemala city (*Champion*).

Antennæ rather short and stout, with inconspicuous exserted setæ, yellow, but rather darker in the middle, so as to be there rather red, second and third joints about equal in length, sixth about as long as broad, the following decidedly transverse, the tenth being nearly twice as broad as long; terminal joint large, three times as long as the tenth. Head short and broad, closely and excessively finely punctate and pubescent. Thorax nearly as broad as the elytra, strongly transverse, being about twice as broad as long, very slightly narrowed behind, the hind angles very obtuse and indistinct, the surface closely and extremely finely punctate. Elytra short, but distinctly longer than the thorax, fuscous, with the hind margin and a broad humeral spot yellow. Hind body with the basal segments yellow, the rest dark, shining, and impunctate. Legs clear yellow.

Three specimens have been found: the structure of the mesosternum and pieces round the middle coxæ is that characteristic of the genus *Myrmedonia*; and the hind tarsi are very slender, with elongate basal joint, the articulations between the joints being, however, very obscure. The facies is suggestive to me of *Homalota hospita* and its allies, for which Rey has established the genus *Thamiaræa*.

14. **Myrmedonia pusilla.**

Nitidula, subtilissime pubescens et punctata, capite abdomineque nigris, hoc basi rufo-testaceo, thorace elytrisque fuscis, his humeris dilutioribus; antennis fuscis, basi apiceque sordide testaceis; pedibus testaceis: prothorace valde transverso, fere elytrorum latitudine.

Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

A small species, bearing a considerable resemblance to the European *Homalota fungi*. Antennæ rather short and slender, but little thicker outwardly, third joint longer than second, penultimate joints transverse; terminal joint very long in proportion to the others, nearly as long as the three preceding together. Head broad and very short, very shining, impunctate, black. Thorax very strongly transverse, twice as broad as long, the hind angles very indistinct, the surface shining, with almost invisible punc-

tuation and pubescence. Elytra short, but longer than the thorax, closely and excessively finely punctate. Hind body shining and impunctate. Legs clear yellow.

Only a single individual has been found; it is without any external indication of its sex.

15. **Myrmedonia fallax.**

Parva, nigra, antennarum basi pedibusque fuscis, nitidula, fere lævigata, tantum in elytris subtilissime punctulata; antennis crassiusculis; prothorace omnium fortiter transverso, elytris quam hic longioribus.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ rather short, stout, third joint longer than second, from fourth to tenth each broader than its predecessor and each, except the fourth, transverse; terminal joint comparatively large, longer than the two preceding together. Head rather large, nearly as broad as the thorax, black, shining, and impunctate. Thorax very short, nearly as broad as the elytra, distinctly narrowed behind, hind angles very indistinct, surface black, shining, and impunctate. Elytra of a fuscous-black colour, very finely and rather closely punctate, so as to be less shining than the rest of the surface. Hind body not narrowed at base nor acuminate behind, the lateral margins strongly elevated, but very fine in the transverse direction, the surface black, shining, and impunctate. Legs fuscous-yellow, the tibiæ and tarsi more dilute than the femora.

Only one specimen has been found; it is probably a female. It is more similar to *Pelioptera micans*, Kr., than to any other species; but the hind tarsi are elongate and very slender.

16. **Myrmedonia godmani.** (Tab. V. fig. 19.)

Ferruginea, antennis extrorsum, elytris angulo externo, abdomineque ex parte nigricantibus, antennarum basi pedibusque testaceis; prothorace quadrato, posterius angustato, dorso inæquali, fortiter punctato; elytris densissime fortiter punctatis, opacis, abdomine lævigato nitidulo.

Long. 9 millim.

Mas abdomine segmento 2° dorsali margine posteriore libero, sinuato, in medio spinoso, margine laterali libero, elongato, acuminato, oblique elevato, segmento 7° granulato, margine posteriore obsolete crenulato.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ rather elongate, loosely articulate and evidently setose, third joint much longer than second, fourth large, fifth scarcely so long as broad, tenth very evidently transverse. Head greatly narrower than the elytra, coarsely punctate, the vertex in the middle smooth. Thorax as long as broad, slightly narrowed behind, the surface coarsely punctate, an obscure depression in front of the scutellum, a more elongate one along the middle, and another at each side; the punctuation does not extend quite to the lateral margin; and the surface shows a kind of elevation running along the

lateral and basal margins. Elytra very densely and roughly punctured, so that the interstices are quite small.

This insect is allied to a group of Amazonian species, and should be placed next *M. scabripennis*, Sharp. Only two individuals, both of the male sex, have been found.

17. **Myrmedonia breviceps.**

Testaceo-brunnea, antennarum basi pedibusque testaceis; antennis crassis, laxe articulatis, longius setulosis, articulis penultimis fortiter transversis; oculis majoribus; prothorace transverso, basin versus angustato, crebre fortiterque punctato; elytris prothoracis longitudine, crebrius fortiter punctatis; abdomine lævigato, nitidulo.

Long. 5 millim.

Hab. Panama, David, Chiriqui (*Champion*).

Of rather broad form. Antennæ very stout, basal joint large, thick and elongate, third considerably longer than second, the penultimate four strongly transverse, terminal joint broad, longer than the two preceding together. Head short and broad, narrower than the thorax; eyes occupying all the sides, the surface shining, coarsely and not closely punctate, the punctures only very slightly impressed. Thorax rather strongly transverse, a good deal narrowed behind, shining, coarsely and deeply punctate, the punctures extending not quite to the margins, the disk rather depressed. Elytra broad and short, more dilute in colour than the head and thorax, the outer apical angle slightly darker, deeply and closely, rather coarsely punctate. Hind body very shining above, beneath sparingly punctate. Legs pale yellow.

Described from a single individual, which is probably a female. The species approximates in many respects to the European subgenus *Zyras*, from which it differs at the same time by the short head and the much greater proportional development of the eyes; the middle coxæ are very distant; and the apex of the intercoxal process of the mesosternum is very broad and quite straightly truncate; the metasternal process is much produced forwards, but leaves a well-marked short and broad intercoxal isthmus; and the margin of the process is in front very distant from the coxæ.

18. **Myrmedonia longipes.** (Tab. V. fig. 20.)

Testacea, elytris ad apicem fuscis, abdomine castaneo-testaceo; antennis gracilibus, in medio obscurioribus; oculis magnis; prothorace transverso, quam elytra angustiore, in medio scabroso-punctato; elytris nitidulis, sparsim punctatis; abdomine nitidulo, versus apicem attenuato et acuminato.

Long. $4\frac{3}{4}$ millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Antennæ slender and elongate, laxly articulated and conspicuously setose, the slender third joint slightly longer than the second, tenth about as long as broad, each joint from the fourth to the ninth much more slender at the base than at the extremity; eleventh joint scarcely so long as the two preceding together. Head broad and short,

rather narrower than the thorax, its surface impunctate and shining, the eyes occupying nearly the whole of the sides. Thorax transverse, a good deal narrower than the elytra, slightly narrowed behind, the surface with a rather coarse tubercular sculpture which does not extend to the margins, and is more scanty along the middle. Elytra longer than the thorax, narrowed at the shoulders, yellow but becoming dark behind, very shining, with a very distant punctuation, consisting rather of obsolete granulations each bearing a fine seta than of impressed punctures. Legs very long, tibial spurs very inconspicuous.

The unique individual described is immature, and is probably a male; the basal dorsal plates of the hind body are very polished and quite impunctate; but the fifth has some coarse punctures across the middle, and the sixth is rather closely and coarsely punctate; it is dull and has at the hind margin three very obscure tubercles; the seventh segment is a little produced in the middle behind, and its hind margin is obscurely crenulate.

This species is an anomalous one, and should probably form a distinct genus, as the head is furnished with a moderately distinct neck. It is apparently more nearly allied to the Amazonian *M. nitidula* than to any other species.

19. **Myrmedonia teres.**

Brevior, lata, nitidula, picea, capite thoraceque fere nigris, antennis fuscis, apice rufo, pedibus testaceis; thorace transversim quadrato, quam elytra angustiore, fere impunctato; his quam thorax vix longioribus, vix punctatis, sparsim setulosis; abdomine lato, basi polito, lævigato, segmento sexto (maris) dense fortiterque punctato.

Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba, 800 to 1500 feet (*Champion*).

Antennæ not largely developed, loosely articulate and conspicuously setose; the basal joint is sordid yellow, the following joints fuscous; but at the apex the joints again become gradually paler, so that the terminal one is nearly yellow; third joint slender, rather longer than second, fourth slender, much longer than broad, from this to the tenth each a little broader than its predecessor, the ninth being about as long as broad, and the tenth slightly transverse, terminal joint as long as the two preceding together. Head very short, truncate behind, eyes not occupying all the sides; the surface very shining, with obsolete but setigerous punctures on each side. Thorax broader than long, but a good deal narrower than the elytra, nearly straight at the sides; the surface very shining, almost impunctate, but bearing some fine hairs. Elytra broad and short, slightly narrowed at the shoulders, of a piceous colour, very shining, sparingly and obsoletely punctate, but the punctures evidently setigerous. Hind body broad, very polished, the lateral margins broad; the fifth segment with fine but quite definite sparing punctures; sixth segment red, densely punctate just in front of the hind margin, with three or four excessively indistinct minute tubercles; hind margin of

seventh segment obscurely crenulate. Wings ample. Legs yellow, hind tarsi elongate, first and second joints both long, the former the longer.

The unique individual described is no doubt a male; and it is possible that the peculiar punctuation of the sixth segment may be a sexual mark.

20. **Myrmedonia mimula.** (Tab. V. fig. 21.)

Nitidula, picea, elytris dilutioribus, antennarum basi et articulo ultimo pedibusque sordide testaceis; prothorace transversim subquadrato, elytris angustiore, fere impunctato; elytris sparsim punctatis; abdomine lævigato.

Long. $3\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ rather short, and at the base rather slender, but much thickened outwardly, third joint almost as long as second, eighth to tenth each transverse, the tenth more conspicuously so; terminal joint large, equal to the two preceding together. Head broad and short, shining, very obscurely punctulate, eyes rather small. Thorax a good deal narrower than the elytra, considerably broader than long, nearly straight at the sides, the surface shining and almost impunctate. Elytra slightly longer than the thorax, slightly narrowed towards the shoulders, very sparingly punctate, the punctures rather indistinct, but conspicuously setigerous. Hind body polished and shining, the lateral margins much elevated.

The unique individual described is a male. It has on the middle of the sixth dorsal plate just before the hind margin two slight, somewhat elongate, tuberculiform elevations, and a similar but smaller and therefore still more indistinct elevation on each side; the seventh plate has on each side behind a slightly raised side margin, and the hind margin is obscurely crenulate, while in front of this the surface bears some granular elevations.

Although this insect resembles *Orphnebius* in appearance, it is allied to *Myrmedonia teres*, and, like it and *M. longipes*, has the head borne on a rather broad but unmistakable neck; the basal joint of the hind tarsus is elongate, and about equal in length to the two following together.

ORPHNEBIUS.

Orphnebius, Motschoulsky, Bull. Mosc. 1858, pt. ii. p. 263, t. 1. fig. 8.

Motschoulsky's genus *Orphnebius* was characterized in only a few words, as follows:—"Form of the *Myrmedoniæ* with narrow thorax and enlarged abdomen, such as *M. canaliculata* and *M. collaris*, but differing by the structure of the tarsi, the longest ("plus long") joint of which is the second and not the first, and that of the antennæ, which, being very elongate, offer as their shortest joint the terminal one. Wings short, not fit for flight." The unique species for which Motschoulsky established the genus

was from Colombia. The figure accompanying the description does not indicate any unusual abbreviation of the terminal joint of the antennæ; so that the genus rests on the facies of the species and the structure of the hind tarsi. In these respects the two species I here assign to the genus agree tolerably with Motschoulsky's characters. They have the head carried on a distinct and narrow neck; and the two basal joints of the hind tarsi are subequal in length, the basal joint being, however, a little the longer, and the fourth joint being only slightly shorter than the basal one. The middle coxæ are extremely widely separated; and the mesosternum is very little produced between them, and presents a very broad quite truncate extremity; the metasternal process between the coxæ is a good deal produced forward; the very fine raised line that bounds it is obtusely acuminate in front, and is remarkable for its great distance from the coxæ; it does not attain, by a considerable interval, the mesosternum; and there is thus left a very broad and by no means short intercoxal isthmus.

This great separation of the middle coxæ, in concomitance with the short basal joint to the hind tarsus, is sufficient to validate the genus, although different species of the polymorphic *Myrmedonia* approach it by various points. A second species of *Orphnebius* with remarkable male characters has been described by Solsky (Hor. Soc. Ent. Ross. xi. p. 8, t. 1. f. 2) from Peru.

1. **Orphnebius lativentris.** (Tab. V. fig. 22.)

Brevior, nitidula, testacea, lævigata; capite parvo; prothorace valde transverso, anterius subtruncato, posterius rotundato; elytris brevibus, sed quam prothorax longioribus et latioribus; abdomine lato, lævigato. Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz, Zapote, Capetillo (*Champion*).

Antennæ rather short, at the base rather slender, a good deal thickened externally, yellow, but the colour of the middle joints more obscure, the penultimate joints strongly transverse, the fifth and sixth slightly so, the terminal joint subcircular, not acuminate, not so long as the two preceding together. Head narrower than the thorax, eyes rather small. Thorax small, greatly narrower than the elytra, but twice as broad as long, the base much rounded, the hind angles completely absent. Elytra impunctate, but with a few fine short setæ. Hind body broad, very polished and shining, lateral margins very largely developed.

Four individuals of this species have been found; all are males. The seventh ventral plate has the hind margin provided with three rather large, broad, subequal teeth, one at each outside, and one in the middle; in front of the latter there is an obscure subtuberculiform elevation, and the outer margin of the plate bears an elongate raised line.

The individual from Capetillo is a slight variety, having the antennæ entirely yellow.

2. **Orphnebius similis.**

Brevior, nitidula, testacea, capite thoraceque piceis; capite parvo, valde transverso; prothorace valde transverso, anterius subtruncato, posterius rotundato; elytris brevibus, sed quam prothorax longioribus et latioribus; abdomine lato, lævigato.

Long. $3\frac{1}{4}$ millim.

Hab. Panama, David, Chiriqui (*Champion*).

This species is very closely allied to *O. lativentris*; but the head is considerably broader and shorter, and the antennæ are more elongate; these organs are clear yellow, and the penultimate joints, though transverse, are not so short as they are in *O. lativentris*.

Two individuals have been found, both males. The last dorsal plate terminates in three broad, rounded, very short teeth; and there is at the base of the central tooth a tubercle or large granule; the outer margin of the plate bears an elongate raised line. A third individual, found on the Volcan de Chiriqui, at an elevation of 3000 or 4000 feet, may also pertain to this species; it appears, however, to be rather larger and more elongate, and the antennæ are dark in colour; this may, however, be the result of the excessively decayed condition of the specimen.

SCEPTOBIUS.

Caput collo discreto sat angusto, oculis minutis. Tarsi anteriores 4-, intermedii et posteriores 5-articulati, articulo basali elongato. Apterus, elytris omnium brevissimis, abdomine dilatato. Coxæ intermediæ contiguæ. Metasternum fere nullum, parapleuris maximis. Sexus differentia maxima.

The position and exact affinities of the remarkable Myrmecophilous insect for which I propose this genus cannot at present be definitely decided, as it appears to be somewhat similar to *Falagria* and *Drusilla*; it is near the latter genus that I advise its location in the meantime. All I can see of the trophi is the maxillary palpi; and these are of the type usual in the Aleocharini. The head is exserted and carried on a very definite narrow (but not extremely narrow) neck. The prothorax is not margined at the sides; and its lateral portions are merely deflexed; the exposed portion of the prosternum is large, and produced between the front coxæ so as to be quite acuminate behind; the front coxæ are very elongate; the middle coxæ are contiguous and prominent, and no portion of the metasternum can be seen except the very large side-pieces, which have a great extension inwards towards the coxæ, but are not visible from above. The male has the antennæ and legs much longer than they are in the female; and in this latter sex the eyes are extremely rudimentary, consisting of a few scarcely united granules; even in the male the eyes are quite small and not visible from above.

1. **Sceptobius dispar.** (Tab. V. fig. 23, ♂.)

Fusco-niger, pedibus fusco-ferrugineis, antennis ferrugineo-testaceis, opacus, dense subtilissime pubescens, subtilissime punctatus.

Long. $3\frac{1}{2}$ millim.

Mas antennis pedibusque elongatis.

Fem. antennis pedibusque mediocribus, illis rigidulis consolidatis.

Hab. Mexico (*Truqui*).

Antennæ in the male nearly as long as the body, destitute of setæ; third joint large; terminal joints closely articulated, so as to have little mobility (as in many other Myrmecophilous Staphylinidæ); terminal joint very elongate, as long as the two preceding together. Head very finely, scarcely visibly punctulate. Thorax nearly as long as broad, a little narrowed behind; in the female rather shorter, and distinctly narrowed behind, scarcely visibly punctate, very finely pubescent. Elytra extremely short, especially at the suture, where they are not half so long as the thorax, extremely finely punctate. Hind body getting broader till the fifth segment is reached, excessively densely and finely punctate and pubescent.

The differences between the sexes is very great. In the female the antennæ, after the third joint, are abbreviated, and their joints amalgamated so as to form an elongate solid piece, the sutures between the joints, however, being visible; the head is smaller than in the male, and more truncate behind, so as to be almost triangular in form; and the prothorax and afterbody are broader. The legs in this sex are probably of ordinary size. In the male the middle and hind legs are elongate, the latter pair being specially large and remarkable, and apparently, from their form and the position they assume, not adapted for locomotion. The tibiæ are stout, and a little oblique-truncate externally at the extremity; the tarsi are large, and continue the direction of the tibiæ; the basal joint is stout and very elongate, almost equal in length to the four following together, each of which is more slender than its predecessor; fourth joint small; fifth slender, almost equal in length to the second joint; claws very minute. In this sex there are no peculiar abdominal structures.

The pair of this species in my collection were captured by Signor Truqui in Mexico; and another pair, obtained from the collection of M. Sallé, is evidently from the same source. The specimens are so extremely fragile that very cautious investigation has caused the detachment of the larger part of what remained of the legs and antennæ of the females. That the species is Myrmecophilous is evident not only from the structure, but from the fact that an ant is mounted along with one of the individuals in M. Sallé's collection.

FALAGONIA.

Facie et summa affinitate generis *Drusillæ*, Rey; sed mesosternum aliter formatum.

The insect for which the above generic name is proposed is very closely allied to the

well-known European *Staphylinus canaliculatus*, Fab., to which Rey (Hist. Nat. Col. Fr., Brév. Myrméd. i. p. 93) has recently restored the old generic name *Drusilla*; but the Mexican insect appears sufficiently different in the details of the structure of the breast to entitle it to generic distinction. The front of the mesosternum is simply margined as in other *Myrmedoniæ*, and is without the large development of the margin existing in *Drusilla*; the mesosternum is rather less produced in the middle between the coxæ, and is truncate behind; and the intercoxal isthmus is longer. The structure of the prothoracic side piece and of the tarsi appears to be identical in the two genera.

The second species of the genus, *F. crassiventris*, is no doubt very closely allied to *F. mexicana*; but the very mutilated and fragile condition of its only known exponent does not allow me to state that it is certainly congeneric.

1. **Falagonia mexicana.** (Tab. V. fig. 24.)

Gracilis, testaceo-brunnea, antennis rufis, pedibus testaceis; capite, thorace elytrisque opacis, his dense asperato-punctatis; abdomine lævigato, nitidulo.
Long. 5 millim.

Hab. Mexico, Jalapa (*Flohr*), Guanajuato (*Dugès, coll. Sallé*).

Antennæ elongate and rather slender; third joint longer than second, fourth shorter than fifth; after this, each rather shorter and broader than its predecessor; tenth about as long as broad; eleventh acuminate, scarcely so long as the two preceding together. Head narrow, suboval, quite dull, obsoletely punctate; thorax elongate, but little narrowed behind, so being nearly oblong in form; the surface dull, densely punctured with a peculiar raised punctuation, obscurely transversely impressed in the middle in front of the scutellum, very obsoletely channelled along the middle. Elytra rather shorter than the thorax, with a similar scabrous sculpture.

The male has the lateral margins of the hind body flatter than those of the female; and the third and fourth dorsal segments bear each a rather large deep depression; the sixth segment is somewhat deplanate along the middle; and the seventh has on the middle a very obscure tuberculiform elevation.

Two individuals (very mutilated) of this species have been sent me by Mr. Flohr; and a third stood in M. Sallé's collection under the name "*Falagria mexicana*," E. Dugès. This latter, a female, is figured.

2. **Falagonia crassiventris.**

Nigricans, nitidula, antennarum basi (tibiisque?) testacea; antennis elongatis, versus apicem latioribus; capite angustulo; prothorace elongato, dorso depresso crebriusque granuloso-punctato; elytris quam thorax fere brevioribus, irregulariter granuloso-punctatis; abdomine lævigato nitidulo, subtus convexo.
Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Cahabon (*Champion*); Panama, Bugaba (*Champion*).

Antennæ elongate, a good deal thicker outwardly, nearly black in the middle, yellow

at the base; the apical joint again rather paler; third joint a good deal longer than the second; fourth shorter than fifth; fourth to tenth joints much narrower at the base than at the apex; tenth about as long as broad; terminal joint both elongate and broad, quite as long as the two preceding together. Head small, only about half as broad as the elytra. Thorax elongate, narrower than the elytra, as long as broad, a little narrowed behind; the disk flattened and closely granulose-punctate, the margins broadly smooth. Elytra with granulose punctuation.

This insect has somewhat the appearance and size of a *Homalota*. A single individual is present from each locality; they are very mutilated and are probably males. Each elytron has an obscure longitudinal carina near the side, and a slight transverse elevation near the base and the suture. The apical dorsal plate of the hind body is granulose and a little prolonged in the middle, the most projecting part being slightly emarginate. On each side there is an obscure angle, not sufficiently prominent to be called a tooth.

PLATONICA.

Coxæ intermediæ late distantes; mesosterni processus inter eas parum productus, apice fere truncato; metasterni processus inter coxas longius productus, apice truncato, cum mesosterni processu fere contiguo. Prothorax marginibus acute inflexis. Tarsi posteriores sat elongati, 5-articulati, articulo basali quam secundus fere duplo longiore.

This genus is proposed for some insects intermediate to a considerable extent between *Myrmedonia* and *Hoplandria*. *Platonica* differs from the former genus by the fact that the sternal processes are more prolonged between the coxæ, so as to become nearly or even quite contiguous, and the raised margin along the inner edge of the coxal cavity is thus completed. The apices of these processes, however, are in some cases rather difficult to distinguish, owing to the margins by which they are limited being nearly obsolete. The genus differs from *Hoplandria* by the greater elongation of the basal joint of the hind tarsus, as well as by other details.

The head is short and quite destitute of a neck. The ligula in the middle is elongate and slender, extends nearly as far forward as the extremity of the first joint of the labial palpus, and is deeply divided at the apex, the division extending nearly halfway to the base; but the divided processes remain parallel. The lobes of the maxillæ are simply ciliate; but the inner one has a free slender extremity provided with a minute and rather imperfect supplementary joint. The rather elongate paraglossæ are of the most extreme tenuity and delicacy. The side of the prothorax forms a sharp edge, owing to the great folding-in of the side pieces.

I am not acquainted with any species, other than those here described, that can be ascribed to the genus.

1. **Platonica major.**

Ferruginea, capite elytrisque externe versus angulos posteriores nigricantibus, pedibus rufo-testaceis; prothorace fortiter punctato, ante angulos posteriores oblique impresso; abdomine sparsim obsolete punctulato.

Long. maris 10, feminæ 8–9 millim.

Mas prothorace dorso deplanato crebriusque punctato, elytris ad latera marginatis, prope angulum suturalem processu triangulari elevato; abdominis margine laterali dilatato, segmento dorsali tertio in medio ante apicem signatura opacula parum elevata, segmento sexto in medio plica longitudinali ad apicem magis elevata.

Hab. Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Antennæ ferruginous, more dilute at the base; first joint elongate, third considerably longer than second, fifth to tenth differing little from one another, each strongly transverse; eleventh joint large, quite as long as the two preceding together. Head black, rather coarsely punctate behind. Elytra a good deal longer than the thorax. Hind body with the dorsal plates shining, only sparingly and obsoletely punctulate, except the seventh, which bears a more distinct rather close punctuation and a fine pubescence. In the male the lateral margin on the wing-case is distinct, and is more than one half the length of the wing-case, but there is no subhumeral carina; the angular elevation at the inner angle is separated by a very distinct smooth space from the suture; the process on the third dorsal plate is large, but is very little elevated, and in front is broader and furcate, so as to be almost Y-shaped; the dilatation of the lateral margins is considerable; but the edges of the ventral plates take scarcely any part in the incrassation, except in the case of the sixth segment, where the edge of the ventral plate is conspicuous on the upper surface for the whole length of the segment, so as to form a rather narrow somewhat sinuous margin.

Five specimens have been found; and it is from one of these which I have dissected that the description of the trophi of the genus is made.

2. **Platonica sallæi.** (Tab. V. fig. 25.)

Ferruginea, capite nigricante, pedibus testaceis; prothorace fortiter punctato, ante angulos posteriores oblique impresso; abdomine sparsim obsoletissime punctulato.

Long. maris 8 millim.

Mas prothorace dorso deplanato crebriusque punctato, elytris ad latera marginatis, ad angulum suturalem processu triangulari elevato, carinaque subhumerali fortiter elevato; abdominis margine laterali dilatato, segmento dorsali tertio in medio ante apicem signatura cruciformi, opacula, parum elevata, segmento sexto in medio plica longitudinali ad apicem magis elevata.

Hab. Mexico, Cordova (*Sallé*).

I have seen only a single individual of this species; and though evidently closely allied to *P. major*, the sexual characters leave no doubt that it is a distinct species. There is a very strongly elevated subhumeral plica on each wing-case, and the elevation at each inner angle is placed quite close to the suture; the opaque mark on the third dorsal plate is not bifurcate, but is simply a little broader in front; the edge of the

ventral plate of this segment is evidently dilated behind; and on the second segment the edge of the ventral plate forms a prominent tubercle on each side about the middle of the length of the segment.

3. **Platonica intermedia.**

Ferruginea, capite elytrisque versus apicem fuscis, pedibus testaceis, antennis fusco-ferrugineis basi apiceque dilutioribus; prothorace fortiter punctato, ante angulos posteriores oblique impresso; abdomine subtiliter punctulato.

Long. 7 millim.

Mas incognitus.

Hab. GUATEMALA, Tactic (*Champion*); PANAMA, Caldera 1200 feet (*Champion*).

Compared with the corresponding sex of *P. major*, this insect is found to be considerably smaller, and to possess a smaller terminal joint to the antennæ; the elytra are rather shorter, and the dorsal plates of the hind body are a little more punctate; while from any of the following species its larger size and broader form leave no doubt of its distinction. The individual from Tactic may possibly, when the male is known, prove to be a distinct species, as it has a decidedly larger punctuation on the dorsal plates of the hind body, and the coloration is slightly different, the thorax and hind body being a little darker and the elytra a little paler in colour.

Only a single individual has been found in each of the two localities.

4. **Platonica acuminata.**

Anterius et posterius evidenter acuminata; ferruginea, capite nigricante, pedibus testaceis; prothorace fortiter punctato, basi in medio vage depressa; elytris quam hic paulo longioribus, parce punctatis; abdomine parce punctato.

Long. $6\frac{1}{4}$ millim.

Mas elytris ad latera breviter marginatis, carina subhumerali conspicua, ad angulum suturalem processu triangulari elevata; abdominis segmento dorsali in medio signatura opacula cuneiformi parum elevata, segmento sexto in medio plica longitudinali ad apicem paulo magis elevata.

Hab. MEXICO, Cordova (*Höge*).

The unique individual found of this species is a male, but is apparently without the denser punctuation of the middle of the thorax existing in that sex of several other species of the genus, and has a narrower head than usual. The antennæ are more slender than in *P. major*, the fifth joint being scarcely transverse; there is a fine punctuation at the base of each dorsal plate; and this is most distinct on the fifth segment; there is no dilatation of the upper edges of the ventral plates.

The species would appear to be most nearly allied to *P. centralis*; but the thorax is paler and rather more coarsely punctate, the elytra are scarcely marked with black at the outer angle, the antennæ are stouter and paler in colour, the raised mark on the third dorsal plate of the male is much broader, but is less elevated, and the dorsal plates are a little more punctate.

5. **Platonica centralis.**

Ferruginea, antennis (basi excepta), capite, thorace, elytris versus apicem abdomineque ante apicem nigricantibus vel fuscis, pedibus testaceis; prothorace basi in medio parum discrete depressa; abdomine apicem versus attenuato, sparsim punctato.

Mas elytris ad latera marginatis, carina subhumerali tenui, ad angulum suturalem processu acuminato; abdomine segmento 3° in medio ad apicem carinula elevata, segmento 6° carinula ad apicem tuberculato-elevata.

Long. 7 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

A rather narrow insect for this genus, with small head. The antennæ are not stout; and joints five to ten scarcely differ from one another in length or breadth. The thorax has the sides and base greatly rounded, is without oblique depression in front of the base on each side, but has a slight depression in front of the scutellum. The dorsal segments of the hind body are very shining; but they have a distinct punctuation, more developed at the bases of the fifth and sixth segments.

The male has the lateral margins of the hind body flatter than they are in the female, and also a little broader, the difference, however, not being striking.

A small series of this species was found by Mr. Champion; the individuals agree closely with one another.

6. **Platonica latifrons.** (Tab. VI. fig. 1.)

Fusca, abdomine ferrugineo, antennarum basi pedibusque testaceis; antennis brevibus crassis; prothorace fortiter transverso; abdomine parum acuminato, fere impunctato.

Mas capite thoraceque in mediis late depressis, ibidemque crebrius punctatis et pubescentibus; elytris ad latera indistincte marginatis, carina brevi subhumerali, ad angulum suturalem processu acuminato; abdomine segmentis 3° 6°que in medio carinula parum conspicua.

Long. 6 millim.

Hab. PANAMA, Caldera 1200 feet (*Champion*).

Antennæ short and stout; third joint but little longer than second, fourth quite small; the others very strongly transverse, so that the terminal joint appears very elongate in comparison with those preceding it. Head broad and very short. Thorax truncate in front, sides and base greatly rounded. Elytra but little longer than the thorax, rather finely punctate. The depressions on the head and thorax of the male are very conspicuous; but the other marks of this sex are not so much developed as in the allied forms.

Five individuals have been found. If I may form an opinion from these, the male characters on the elytra and hind body vary somewhat in the amount of their development. The short and broad more finely punctate head, and the darker colour of the anterior parts appear to be the superficial characters by which the females of this species may most readily be recognized.

7. **Platonica chiriquensis.**

Ferruginea, capite superne elytrisque fuscis, his basi ferruginea, pedibus testaceis; antennis brevibus, crassis, articulis 5°–10^{m} valde transversis; capite lato, sparsim fortiter punctato; prothorace utrinque ante angulos posteriores obsolete oblique impresso; abdomine nitidulo, parum punctato.

Mas elytrorum lateribus subtiliter marginatis, carina subhumerali parum elongata, ad angulum suturalem processu acuminato elevato; abdominis segmento 3° in medio plaga longitudinali parum elevata, segmento 6° carinula elongata ad apicem magis elevata.

Long. 5½ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet, Bugaba 800 to 1500 feet (*Champion*).

Antennæ ferruginous; third joint little longer than second, fourth small, fifth to tenth differing little from one another, each strongly transverse. Thorax sparingly and coarsely punctate, indistinctly depressed at the base in the middle, and with an indistinct oblique impression on each side, these depressions less distinct in the female than in the male; it is very transverse, the sides and base forming one continuous curve. There is a very scanty fine punctuation on the dorsal plates of the hind body, which is rather more distinct in the female than in the male.

A series of three males and five females of this species have been sent by Mr. Champion. Except in the sexual differences, they agree closely with one another, the unique female from Bugaba being, however, a little smaller.

8. **Platonica fuscicollis.**

Ferruginea, capite, thorace elytrisque (basi excepta) nigricantibus vel fuscescentibus, antennis in medio obscurioribus, articulis 5°–10^{m} fortiter transversis; prothorace basi in medio late impressa; abdomine nitidulo, sparsim punctato.

Mas elytrorum lateribus breviter marginatis, carina subhumerali elevata, ad angulum suturalem processu acuminato elevato; abdominis segmento 3° in medio plaga longitudinali parum elevata, segmento 6° carinula elongata ad apicem magis elevata.

Long. 6 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, Quiche Mountains 7000 to 9000 feet (*Champion*).

Although very closely allied to *P. chiriquensis*, this appears to be a distinct species. The individuals are slightly larger, and joints five to ten of the antennæ are not quite so short. The thorax is darker in colour, being fuscescent, with the margins more or less pale, and the basal impression in front of the scutellum very distinct: this is more or less distinctly divided into two by an elevation in its middle; and on each side of it, behind, the surface is a little elevated. The punctuation of the dorsal segments of the hind body is a little larger. The male characters are very similar in the two species.

Nine individuals (three of them males) have been obtained. They exhibit but little variation. The specimen from the Quiche Mountains is not quite certainly the same

species, as it has the joints of the antennæ just a little longer and the thoracic impression rather slighter. As, however, it is a female, and these characters are very slight, no certain opinion can be formed about it.

HOPLANDRIA.

Hoplandria, Kraatz, Linn. Ent. xi. p. 4, t. 1. f. 6, t. 2. f. 14.

This genus at present comprises ten described species from the New World (where it ranges from the southern portions of the United States to Brazil and to Chili) and a single species from Ceylon. I am acquainted, however, with numerous undescribed Brazilian *Hoplandriæ*, and the genus will probably prove to occupy an important position among the more characteristic genera of Staphylinidæ of the tropics of the New World. Its characters and limits, however, are at present ambiguous. Kraatz (*l. c.*) defined it almost solely from the mouth-parts; and as regards these he seems to have overlooked one of its most important peculiarities, viz. that the terminal joints of the palpi are provided with a minute supplementary joint as in the genus *Aleochara*. *Hoplandria*, moreover, approximates to the latter genus in the shape and structure of the prothorax, and even (though to a less complete extent) in the considerably backward prolongation of the mesosternal process. The front tarsi, however, are only four-jointed; and the genus is connected with the polymorphic *Myrmedonia* in a conspicuous manner by means of *Platonica*. It thus represents, in the tribe Myrmedoniates, the genus *Aleochara* of the Aleocharates. As no description has been given of the sternal structure, I may add that the intermediate coxæ are widely separated, and that the mesosternal process is much produced between them, and joins the metasternal prolongation, so that the middle coxal cavities are completely margined; the raised border of the mesosternal process is remarkably distinct, and is strongly elevated even at the apex, so that a very conspicuous transverse (but not straight) raised margin extends across the space separating the intermediate coxæ.

1. **Hoplandria gemina.** (Tab. VI. fig. 2, ♂.)

Ferruginea, capite thoraceque, antennisque nigricantibus, his basi testacea, abdomine apicem versus piceo; thorace valde transverso, æquali, haud impresso, cumque elytris parum crebre vix fortiter punctatis; abdomine nitidulo, parum punctato.

Mas elytris ad angulum suturalem processu acuminato, parum elevato; abdominis segmento 2° ad latera utrinque margine laterali libero, posterius breviter producto, segmento 3° carinulis duabus elevatis distantibus, segmento 6° in medio carinula elongata ad apicem magis elevata.

Nota. Maris characteres sexuales supra notati interdum fere omnino desunt.

Long. 5 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, Las Mercedes 3000 feet (*Champion*).

Antennæ rather slender, but decidedly thickened towards the extremity, very loosely articulated and evidently setulose; third joint slender, hardly longer than second;

ninth and tenth scarcely transverse; eleventh rather small, yellow externally, not so long as the two preceding together. Thorax without depressions, its sides much rounded and quite without posterior angles. Elytra more or less vaguely darker about the outer apical angle, not closely and rather finely punctate. Hind body very shining, with a slight punctuation at the extreme base of the fourth, fifth, and sixth segments. Legs yellow.

Of this species eight individuals are before me, five from Cerro Zunil, three from Las Mercedes. They show a little variation in the depth of colour of the thorax; but, on the other hand, the prominences on the hind body of the male can in some individuals scarcely be detected; so that these processes would seem to be the seat of a variation of development similar to what is so well known and remarkable in the family of the Lamellicorns, where, however, the variable armature is seated on the anterior parts of the body.

The insect bears such an extreme resemblance to *Platonica fuscicollis* that Mr. Champion had in one case mounted an individual of each of the two species on one card, supposing them to be the same species.

2. **Hoplandria digna.**

Nigro-picea, nitida, antennarum basi sordide rufa, tarsis rufis; prothorace rotundato-transverso, basi in medio paululum producta et subtruncata, parce punctato; abdomine elongato, apicem versus acuminato, nitidulo, parum punctato.

Mas elytris ad angulum suturalem tuberculo erecto acuminato, circa tubercula depressiusculis; abdominis segmento 2° ad latera utrinque margine laterali posterius dilatato, apice parum producto; segmento 6° in medio apicem versus breviter carinato, carina ad apicem fortiter elevata.

Long. $5\frac{1}{2}$–7 millim.

Var. abdomine ad apicem late rufo.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ rather short and stout, basal joint fuscous red, the two following joints clearer red, the terminal joint yellowish at the apex, joints four to ten rather strongly transverse. Basal margin of thorax very distinct, and in front of the scutellum slightly but visibly produced backwards, and appearing there a little truncate. Hind body gradually and regularly narrowed towards the apex, very shining, but not altogether impunctate, segments four to six having a small punctuation on the basal portion.

Eight individuals of this species are before me: they show a good deal of variation in size; and in the two smaller individuals the apical segments of the hind body are red. The male characters show some difference in the amount of their development.

3. **Hoplandria brevicollis.**

Nigra, nitida, antennarum basi tarsisque rufis; prothorace fortiter transverso, fortiterque punctato; abdomine apicem versus acuminato, nitidulo, parum punctato.

Long. $4\frac{3}{4}$ millim.

Hab. GUATEMALA, Senahu (*Champion*).

Antennæ short, much thickened towards the extremity, the four basal joints red; fifth joint small, scarcely transverse.

Although very similar to *H. digna*, this is no doubt a distinct species. The individuals are of smaller size; the fifth joint of the antennæ is very much smaller; the base of the antennæ is clear red; and the thorax is rather shorter and more deeply punctate.

Two individuals have been found; they exhibit no sexual characters.

4. **Hoplandria rufa.** (Tab. VI. fig. 3.)

Rufa, nitida, antennis in medio nigris, basi apiceque cum pedibus testaceis, elytris extrorsum fuscis; prothorace valde transverso, obsolete punctato; abdomine apicem versus attenuato, nitidulo, parum punctato.

Mas elytris ad angulum suturalem plicula elevata; abdominis segmento 3° dorsali in medio ante apicem carinulis duabus parum elevatis, segmento 6° in medio longius carinato.

Long. $4\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ rather slender, but distinctly thickened towards the apex; the four basal joints and the apical one yellow, the others black; joints nine and ten slightly transverse. Head red, almost impunctate. Thorax red, only very indistinctly punctate, basal margin very distinct, scarcely visibly emarginate in front of the scutellum. Elytra a good deal longer than the thorax, finely and not closely punctate, but with the pubescence conspicuous. Hind body with segments fourth and fifth more or less darker in colour in the middle, and segments fourth to sixth with a distinct punctuation at the base, more extensive on the sixth than on the others. Legs clear yellow.

Six specimens have been found.

5. **Hoplandria picea.**

Picea, nitidula, tarsis rufis; prothorace valde transverso, obsolete punctato, elytris quam hic paulo longioribus, crebre punctatis; abdomine nitidulo, parum dense strigoso-punctato.

Mas elytris ad angulum suturalem plicula minuta elevata, abdominis segmento 3° dorsali carinulis duabus parum conspicuis, segmento 6° dorsali in medio carinula parum elevata.

Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ piceous, the outer half nearly black, rather slender, but evidently thicker towards the extremity; third joint rather longer than second, fifth and sixth each about as long as broad, tenth evidently transverse. Elytra rather short, but distinctly longer than the thorax, moderately closely punctate. Hind body with a peculiar sculpture, having the appearance of fine elevations, or of short setæ fastened down to its surface.

The species has much resemblance to *H. brevicollis*; but the thoracic punctuation is very different; the peculiar sculpture of the dorsal plates of the hind body greatly assists to its recognition. Four individuals have been found.

6. Hoplandria flavicans.

Flavicans, capite abdomineque ante apicem piceis; antennis rufis, basi testacea, articulis 5°–10ᵐ valde transversis; prothorace transverso, subtiliter punctato; abdomine mediocriter punctato.
Long. 4 millim.
Mas elytris ad angulum suturalem minus alte tuberculatis, abdominis segmento sexto longius carinato.

Hab. Mexico, Guanajuato (*Sallé*).

Antennæ short and stout, third joint rather short, shorter than second, fourth joint small but transverse, joints fifth to tenth strongly transverse, joints eight to ten not broader than the seventh, indeed just perceptibly narrower, terminal joint rather large. Head small, scarcely half as broad as the elytra, obscurely punctate. Thorax rather strongly transverse, with the base greatly rounded, finely and not closely punctate, without depressions. Elytra rather longer than the thorax, yellow, slightly fuscescent at the sides behind, sparingly and rather finely punctate. Legs not elongate, clear yellow.

The two individuals described are males; in addition to the characters mentioned above, they have two extremely minute tubercles on the middle of the third dorsal plate. M. Sallé has proposed the MS. name of *Aleochara bicolor* for this species; but the rather widely separated coxæ, and the less elongate mesosternal process, and the four-jointed anterior tarsi indicate that the position of the species is in or near *Hoplandria*. I am not able to get a sight of the ligula.

7. Hoplandria vestita.

Fusco-ferruginea, anterius crebrius pubescens, antennarum basi pedibusque rufo-testaceis, capite nigricante; prothorace fortiter transverso, obsolete punctato; abdomine apicem versus attenuato, segmento 6° dorsali crebre punctato.
Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ short, thickened towards the apex; joints five to ten rather short, transverse; terminal joint as long as the two preceding together. Head nearly black, small, not more than half as broad as the thorax. Thorax reddish, strongly transverse, the sides and base much rounded, indistinctly punctate, but conspicuously pubescent. Elytra obscure reddish in colour, longer than the thorax, rather closely and distinctly punctate. Hind body dark red, the segments more or less piceous in colour at the base of each; the basal segments, a slight punctuation at the extreme base of the fifth segment, and the sixth segment moderately closely punctate. Legs rather short.

This is in appearance much like an insect of the genus *Aleochara*; the ligula is rather elongate and minutely bifid at the extremity. The mesosternal process is much produced backwards between the middle coxæ.

Three individuals have been found; they are in extremely fragile condition, and show no character from which I can infer their sex.

8. **Hoplandria peltata.**

Ferruginea, capite thoraceque nigricantibus, antennis extrorsum fuscis, abdomine piceo; antennis brevibus; prothorace transverso, parum crebre punctato, basi omnium fortius rotundata; elytris crebre punctatis; abdomine nitidulo parum punctato.
Long. 6 millim.

Hab. Mexico, Tehuacan (*Höge*).

Antennæ short, rather obscure red at the base, darker after the third joint, this and the second joint of about one length; fourth joint small, about as long as broad; fifth and following joints rather strongly transverse, and similar to one another, the tenth not being broader than the sixth; terminal joint as long as the two preceding together. Thorax with the sides and base extremely rounded, the surface rather sparingly but not altogether finely punctate. Elytra along the suture not longer than the thorax in the middle, moderately closely and distinctly punctate. Hind body strongly acuminate behind, the dorsal plates shining and very sparingly punctate, but the apical segments less sparingly than the basal ones, there being a very distinct punctuation at the base of the sixth segment.

This, again, is a very Aleocharoid species, and has the basal joint of the hind tarsus a good deal longer than the second; but the front tarsi are evidently four-jointed, and I do not detect any supplementary joint at the apex of the palpi; the mesosternal process is much produced between the coxæ, and the margin by which it is bordered remarkably distinct. I have seen only a single specimen.

9. **Hoplandria lugubris.**

Nigra, dense punctata, fere opaca, pedibus fusco-testaceis, tarsis dilutioribus; antennis sat elongatis, ad apicem haud incrassatis; abdomine apicem versus fortiter attenuato, dense (segmento 6° parcius) punctato.
Long. $5\frac{1}{4}$ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cerro Zunil 4000 feet (*Champion*); Panama, Volan de Chiriqui 4000 to 600 feet (*Champion*).

Antennæ rather elongate and stout; third joint elongate, rather longer than second; fourth joint as long as broad, a little narrower than the fifth; fifth to tenth similar to one another in width, but each just perceptibly shorter than its predecessor, so that the tenth is distinctly shorter than the fifth; eleventh joint elongate, longer than the two preceding together. Head rather narrow. Thorax transverse, the sides strongly rounded in front, less so behind, but the hind angles extremely obtuse, the surface finely and evenly, rather closely punctate, but little shining. Elytra a little longer than the thorax, closely and finely punctate, dull. Dorsal plates of the ventral segments closely punctate, the punctuation more sparing at the hind margin of each segment; and on the sixth segment there is but little punctuation.

The male has a scarcely perceptible tubercle on the hind margin of each wing-case

at some distance from the suture; and the sixth dorsal plate of the hind body has a carina on the middle behind.

This is a very Homalotoid species in appearance, but not in structure; the ligula is elongate and linear; and the mesosternal process is comparatively little prolonged between the middle coxæ.

10. **Hoplandria debilis.**

Nigra, nitidula, pedibus testaceis, antennarum basi sordide testacea; abdomine nitidulo, segmentis 2°–5ᵐ summa basi fortiter punctata, præterea lævigato.

Long. $3\frac{1}{2}$ millim.

Mas elytris singulis ad medium apicis tuberculo elongato, acuminato, recurvato; abdominis segmento 6° dorsali carinula elevata.

Hab. GUATEMALA, Guatemala city, San Gerónimo, Paraiso 300 feet (*Champion*).

Antennæ slender at the base, gradually thickened from the fourth to the tenth joint; third joint rather shorter than second, fourth slender, tenth distinctly transverse; eleventh rather large, the apex more or less distinctly paler in colour. Head rather broad, indistinctly punctured. Thorax strongly transverse, the base rounded, the hind angles very indistinct, but present, the surface indistinctly punctate, but the pubescence rather conspicuous. Elytra not broad, moderately distinctly punctate, very distinctly pubescent. Hind body very shining, but with a band of dense rugose sculpture at the base of each of the anterior segments. Legs pale yellow.

The individuals of this species have much the appearance of some of the European *Homalotæ*, such as *H. fungi*. The dense and deep punctuation at the base of each of the anterior abdominal segments, in strong contrast to the very smooth posterior portion of the plate, is almost peculiar to the species; but this punctuation can only be seen when the hind body is extended to its natural length.

Five individuals have been found, only one of which (an immature example from San Gerónimo) is a male.

CHAROXUS.

Tibiæ anteriores, dense fortiterque spinulosæ, intermediæ et posteriores muticæ. Mandibulæ elongatæ, muticæ. Caput elongatum, antennis fere in marginem anteriorem insertis. Prothoracis margo lateralis ad angulos posteriores angustus, in medio et anterius nullus.

The position of the anomalous little insect for which I propose this generic name is at present a question of some doubt, as the middle tarsi have apparently only four joints, which would indicate that the insect must be placed in the Bolitocharates; I believe, however, that there is a very short basal joint present in addition to the four that are conspicuous. The insertion of the antennæ almost at the front margin of the head would suggest that the insect is a member of the subfamily Staphylinini rather than of the Aleocharini; but, notwithstanding these facts, I think that the genus *Porus*

is the true ally of *Charoxus*, and that by this genus it is connected in a satisfactory manner with the Myrmedoniates. The maxillary lobes are elongate; and their palpi differ little from the ordinary Aleochariniform type, the terminal joint being very slender in proportion to the penultimate joint, which, however, is not dilated, but slightly more slender and much longer than the preceding. The eyes are placed quite at the base of the mandibles; and the antennæ are inserted at the front of their inner margin. The anterior tarsi are very slender and are four-jointed; the front tibiæ are densely armed externally with coarse spines. The middle coxæ are moderately separated; and the mesosternum is produced between them, as is also the metasternum; the extremity of the mesosternal process is truncate, and does not quite touch the metasternal prolongation, the two being separated, just at about the middle of the length of the coxæ, by a very short intercoxal isthmus. The middle tibiæ are very slender; and though in comparison with the front ones they may be said to be unarmed, yet they really bear on their outer edge a series of very fine rather long spines. The hind tibiæ are quite without spines; their tarsi are very slender and about as long as the tibiæ; they are five-jointed, the four basal joints being subequal in length, the fifth distinctly but not greatly longer than any of the others.

1. **Charoxus fodiens.** (Tab. VI. fig. 4.)

Elongatus, subparallelus, haud depressus, glaber, nitidus, testaceus, elytris ad latera posterius, abdomine ante apicem antennisque fuscis, his basi rufo-testacea, capite brunneo; prothorace elongato, parallelo, transversim convexo, basi rotundata, sparsim punctato; elytris quam hic paulo longioribus.

Long. $3\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ short and extremely stout, even the fourth joint, though much narrower than those following, is transverse, the fifth to tenth are very strongly transverse, terminal joint not acuminate. Head elongate, coarsely punctate. Prothorax straight at the sides, very convex transversely, longer than broad, shining, very sparingly punctate. Elytra and hind body almost impunctate.

The only individual found is immature and in very fragile condition, so that its examination, even in an imperfect manner, has been difficult.

TACHYUSA.

Tachyusa, Erichson, Käf. Mark. i. p. 307; Gen. et Spec. p. 69; Rey, Col. Fr., Brév. Myr. ii. p. 380.

This genus possesses about twenty species in the European region; and four species from North America and two from Chili are supposed to belong to it. The South-American *T. picticornis* and *T. extranea*, Sharp, must be removed from the genus and placed in *Myrmedonia*.

1. **Tachyusa sparsa.**

Gracilis, nigra, nitida, sparsim subtilissime punctulata et pubescens, antennis fuscis, pedibus fusco-testaceis; prothorace quam elytra angustiore, basin versus leviter angustato, ante scutellum obsolete impresso; abdomine segmentis basalibus ad basin profunde transversim depressis.

Long. 3 millim.

Hab. MEXICO (*Truqui, coll. Sallé and Sharp*); GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ rather short, third joint about equal to the second, the penultimate joints transverse. Head and thorax very sparingly punctate. Elytra slightly longer than the thorax, rather more distinctly punctulate and pubescent. Hind body very sparingly pubescent and punctulate.

I have seen but four specimens of the species, all in very dilapidated condition; the individual in M. Sallé's collection was, from its style of mounting, evidently one of Truqui's captures. The solitary example from Guatemala has lost its antennæ, and is of rather darker colour and more elongate form.

The species may be distinguished from the species of *Gnypeta* by the more sparingly pubescent upper surface. The middle coxæ are less separated; and the mesosternal process is quite slender, and is separated by an elongate space from the obscure termination of the metasternal process, the posterior margin of the coxal cavities being excessively indistinct.

2. **Tachyusa seticornis.**

Nigra, sparsim subtilissime punctulata et pubescens, antennis fuscis, pedibus fusco-testaceis; capite thoraceque opaculis, impressis; elytris abdomineque nitidulis.

Long. $3\frac{1}{4}$ millim.

Hab. MEXICO (*Truqui, coll. Sallé and Sharp*).

Antennæ rather elongate; third joint somewhat curvate internally, equal in length to the second; fourth larger than the following ones, slightly dilated, and furnished inwardly with four slender, erect, elongate black setæ, the penultimate joint rather strongly transverse. Head broad, the surface flat, and somewhat depressed, excessively minutely punctulate, so that the surface appears dull. Thorax with similar sculpture to the head, narrower than the elytra, narrowed behind, flattened and broadly impressed on the middle. Elytra but little longer than the thorax, sparingly and very finely punctate and pubescent, shining. Hind body sparingly punctate, shining, the basal segments deeply transversely impressed.

I have seen but three individuals, in very fragmentary condition; they are probably all males, the terminal ventral plate being a good deal produced; and it is likely that the peculiarity of the antennal structure may also be sexual.

GNYPETA.

Gnypeta, Thomson, Öfv. Vet. Ak. Förh. 1858, p. 33; Sk. Col. iii. p. 6; Rey, Col. Fr., Brév. Myr. ii. p. 367.
Homalota ex parte, Er.

This genus has been comparatively recently established by the above writers for three or four European species placed by previous authors in the great genus *Homalota*. Little is known about the genus beyond the limits of Europe; but Fauvel has recently described a species from Australia as pertaining to the genus. The New-world species here described are extremely similar in appearance to the European members of the genus; but two of them have the intermediate coxæ more distant. The other species, *G. mexicana*, makes a close approach to *Tachyusa*.

1. Gnypeta nigricans.

Nigra, nitida, pube tenuissima dense vestita, subtilissime punctata, pedibus fusco-testaceis; prothorace subquadrato, postice leviter angustato, basi bifoveolata.
Long. 3 lin.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*); Guatemala, Guatemala city and San Gerónimo (*Champion*).

Antennæ only moderately long and slender, third joint a little shorter than second, tenth slightly transverse. Head as broad as the thorax, with a fine punctuation of impressed punctures, and with a depression on the middle. Thorax a good deal narrower than the elytra, slightly but distinctly narrowed behind, its punctuation scarcely visible, at the base in front of the scutellum with two small foveæ very close together. Elytra very indistinctly punctulate, a little longer than the thorax. Hind body rather broad, sparingly and very indistinctly punctulate. Legs infuscate yellow, with the tarsi yellow.

The species is extremely similar to the European *G. labilis*; but the extremely fine punctuation is less dense, and the prothorax is distinctly narrowed behind, and on the under surface the intercoxal process of the mesosternum is considerably broader and has a truncate apex.

2. Gnypeta fragilis.

Nigra, nitida, abdominis basi sordide testacea; pube subtilissima vestita, subtilissime punctata, pedibus testaceis, tibiis antennisque fusco-testaceis, his articulo ultimo elongato, colore dilutiore; prothorace transversim subquadrato, postice leviter angustato; abdomine dense subtilissime punctato.
Long. $2\frac{3}{4}$ millim.

Hab. Guatemala, Paso Antonio 400 feet (*Champion*).

Antennæ slender, rather elongate, fuscous in colour, the terminal joint paler than those preceding it, and rather longer than the ninth and tenth together, the latter not transverse. Head rather short and broad, scarcely visibly punctulate. Thorax

evidently narrower than elytra, gently narrowed behind, evidently transverse, very feebly punctulate, and only indistinctly impressed in front of the scutellum. Elytra rather short and broad, but longer than the thorax, extremely finely punctate. Hind body densely and excessively finely punctate.

Of this species Mr. Champion has sent two specimens, immature and in very fragile condition. The hind margin of the elytra is narrowly yellow, possibly from immaturity. The species is quite distinct from the others here assigned to the genus, the transverse depressions on the basal abdominal plates being indefinite. The middle coxæ are rather broadly separated, as in *G. nigricans*.

3. **Gnypeta mexicana.**

Nigra, nitida, tenuiter pubescens, antennarum basi pedibusque testaceis; prothorace subquadrato, postice leviter angustato, basi bifoveolata.

Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Guanajuato (*Dugès, coll. Sallé*).

This insect is very similar to *G. nigricans*, but is an undoubtedly distinct species, the middle coxæ being more approximate and the mesosternal intercoxal process being narrower, so as to terminate in a point instead of being truncate. The antennæ and legs are rather more slender and elongate. The head is finely and sparingly punctate; the fourth joint of the antennæ rather elongate. The thorax much narrower than the elytra, but hardly so long as broad, sparingly punctate. The elytra are sparingly and very finely punctate, the hind body rather more closely.

The unique individual of this species was preserved in Sallé's collection as *Tachyusa mexicana*, E. Dugès.

RECHOTA.

Ex affinitate generis *Gnypetæ*; sed caput posterius subangustatum, collo sat lato; coxæ intermediæ satis distantes, laminaque mesosternalis apice lato, truncato; tarsi posteriores tenues, articulo basali elongato, sequentibus duobus simul sumtis fere æquali.

This genus is established for an insect having the sculpture and coloration of the species of the genus *Gnypeta*, and with the same number of joints in the various tarsi (4, 5, 5); but it had better be separated on account of the peculiarities I have mentioned. The three basal plates on the dorsal surface of the hind body are transversely impressed as in *Gnypeta*. Not only is the apex of the mesosternum truncate, but also the anterior point of the metasternum is in the same condition, there being thus left between the two coxal cavities a very short parallel-sided isthmus at about the middle of the length of the cavities. The prothoracic side pieces are of moderate size, as in *Gnypeta*.

In addition to the species for which the genus is founded, another closely allied one was found by Squires at Rio de Janeiro.

1. **Rechota impressa.** (Tab. VI. fig. 5.)

Gracilis, nigra vix ænescente (abdomine basi interdum pallidiore), nitida sed pube tenuissima sat dense vestita, haud perspicue punctulata, pedibus fusco-testaceis, femoribus basi tarsisque dilutioribus; prothorace quam elytra multo angustiore, ante basin late profundeque impresso.
Long. $2\frac{1}{2}$–3 millim.

Hab. GUATEMALA, San Gerónimo, Guatemala city, Capetillo, San Joaquin in Vera Paz, and Coban (*Champion*).

Antennæ only moderately long and slender; third joint a little shorter than second; tenth scarcely so long as broad: the colour is nearly black; but the basal joint is sometimes obscure yellow. Head about as broad as thorax, excessively finely punctulate, rather deeply impressed along the middle. Thorax not so long as broad, conspicuously narrower than the elytra, the greatest width near the front angles, which are very rounded and depressed, the sides a little narrowed behind, with a large but variable impression along the middle. Elytra quadrate, longer than thorax. Hind body not narrowed at base, its punctuation extremely dense and fine, but not quite so invisible as that on the anterior parts.

The small series of specimens shows a good deal of variation, as regards the thoracic impression, the colour of the legs and base of the antennæ, and the basal segments of the hind body.

MERONA.

Prosternum parvulum, parte supracoxali truncata, post coxas membranaceum. Coxæ intermediæ sat distantes. Mesosternum inter coxas vix productum, apice truncato, haud libero. Tarsi anteriores 4-, intermedii et posteriores 5-articulati.

This genus is proposed for some minute insects the described species of which have not yet been distinguished from *Falagria*. The structure of the prosternum is so profoundly different, however, that the proximity of the two forms cannot be great. The antecoxal portion of the prosternum is not large, and is not separated by any definite mark from the supracoxal portion, which also is not large, and is truncate, or nearly so, behind; the posterior portion of the prosternum is entirely membranous. The mesosternum has no trace of a neck in front. Additional remarks elucidating this and other genera proposed in this work at the expense of *Falagria* will be found under the heading of the latter generic name.

The genus will contain, in addition to the species here enumerated, *F. venustula*, Er., and some undescribed Brazilian species, and possibly *F. deliciata*, Er. These insects have the prothorax without channel; its anterior portion, too, is little elongate, so that the head appears less free than in the allied genera. Both *Merona* and *Neolara* have the side pieces of the prothorax very much reduced in size, and approximate in this respect to *Falagria*.

1. **Merona fragilis.** (Tab. VI. fig. 6.)

Parum elongata, subdepressa, capite thoraceque sordide rufis, fortiter punctulatis; elytris pectoreque fuscis, illis basi apiceque testaceis; abdominis basi testacea, apice nigro; antennis pedibusque testaceis, femoribus apicem versus fuscis.

Long. 2 millim.

Hab. GUATEMALA, near the city, Capetillo (*Champion*).

Antennæ slender, distinctly thickened outwardly, generally more or less obscurely darker towards the extremity; third joint about equal to the second; tenth about as long as broad. Head broad and rather short, truncate behind, with the hind angles rounded. Thorax rather short, rounded in front, and a good deal narrowed behind, rather coarsely and closely punctate, without channel or fovea. Elytra rather broad and short, a little longer than the thorax, slightly narrowed towards the shoulders, yellowish but more or less infuscate, sparingly and finely punctate. Hind body rather broad, sparingly punctate. The three basal segments yellow, the three following black. Legs very slender, yellow, the femora more or less infuscate outwardly.

This insect is closely allied to the North-American *Falagria venustula*, Er., but is of smaller size and paler colour, and with less dense punctuation on the head and thorax. A good series has been found, and shows very little variation, except in the extension and depth of the colour of the infuscate portions.

2. **Merona brevicollis.**

Parum elongata, subdepressa, nigra, elytris apice et humeris, antennis articulo primo, trochanteribus, tibiis tarsisque testaceis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ with the basal joint yellow, the following one fuscous, the others nearly black, formed as in *Merona fragilis*, but rather thicker. Head broad and short, sparingly and feebly punctate. Thorax broader than long, rounded in front, narrowed behind, rather sparingly and not coarsely punctate. Elytra nearly black, with the apical margin broadly yellow, and the base with a small yellow patch on each side, finely punctate. Hind body entirely black, feebly punctate. Legs pale yellow, with the femora nearly black.

The single individual found by Mr. Champion is in very fragile condition; but the glance I have obtained of its under surface seems to show that it is closely allied to *M. fragilis*, from which it differs by its larger size, different colour, and the feebler punctuation of the head and thorax.

3. **Merona polita.**

Parum elongata, subdepressa, nitidula, fere impunctata, testacea, abdomine nigro-cingulato, antennis ante apicem elytrisque posterius fuscescentibus.

Long. 2 millim.

Hab. Guatemala, Zapote (*Champion*).

Antennæ yellow, with the penultimate joints rather vaguely darker, of only moderate length, a good deal thickened towards the apex; third joint a little shorter than second, the following joints slender; the tenth not quite so long as broad. Head short and broad, shining, and impunctate. Thorax rather broader than long, not greatly narrower than the elytra, the sides as well as the front rounded, so that it approximates to a circular form, like the head, shining and impunctate. Elytra short, but little longer than the thorax, towards the apex broadly infuscate. Hind body with the basal and apical segments yellow, the fourth and fifth black. Legs dark yellowish, the base of the hind femora paler.

A single individual only has been found; the polished surface will greatly assist in the recognition of this species.

NEOLARA.

Prosternum ante coxas mediocre, parte supracoxali acute spinosa, post coxas membranaceum. Coxæ intermediæ distantes; mesosternum anterius collo discreto, medio inter coxas parum producto, apice truncato, haud libero. Tarsi anteriores 4-, intermedii et posteriores 5-articulati.

This is another genus hitherto not distinguished from *Falagria*, but with the pro sternum entirely membranaceous behind the coxæ. It is allied to *Merona*; but both the prosternum and mesosternum exhibit important differences. The antecoxal portion of the former is definitely marked off from the supracoxal portion; and this latter is attenuate behind, its apex projecting downwards as a slender spine. The mesosternum is constricted, or transversely depressed behind the front margin, so as to form a neck; the middle coxæ are widely separated, the intercoxal process of the mesosternum is quite short, and is truncate behind. The insects of this genus have a quite disengaged head; and the prothorax is without channel. *Falagria alboguttata*, Er., from Colombia and Brazil, is probably a *Neolara*; and I have some other undescribed Brazilian species in my collection. The resemblance in facies to *Gansia* is considerable; but that genus has the intermediate tarsi quadriarticulate, and therefore will at present occupy a different systematic position.

1. **Neolara centralis.** (Tab. VI. fig. 7.)

Gracilis, nigra, elytris abdominisque basi testaceo-maculatis; antennis testaceis, extrorsum fuscis; trochanteribus tarsisque albidis.

Long. 3 millim.

Hab. Guatemala, Capetillo, Guatemala city (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba 800 to 1500 feet, David (*Champion*).

Antennæ a good deal longer than head and thorax, thickened towards the extremity, yellow, with the three or four apical joints infuscate; third joint rather longer than

second; tenth about as long as broad. Head picescent or nearly black, sparingly but distinctly punctate. Thorax much rounded and narrowed in front, so that the head is very disengaged, narrowed behind, but the narrowing not quite continued to the base, rather coarsely (but not closely) punctate. Elytra broad and short, a little longer than the thorax, shining black, sparingly punctate, the base yellow, and a very definite spot of pale yellow on the hind margin at the outer angle. Hind body black, shining, and almost impunctate, the first and second segments pale yellow, but marked with black on the dorsal plates. Legs black, the trochanters, the tarsi, and likewise the extreme base of the tibiæ pale yellow.

This species varies in the colour of the head and thorax, these being sometimes red, but in other cases nearly black; the punctuation of these parts is also a little variable. *Falagria alboguttata* appears, from Erichson's description, to be an allied species, but with a more conspicuous pubescence and larger punctuation.

FALAGRIA.

Falagria, Mannerheim, Brachel. p. 86; Er. Gen. et Spec. Staph. p. 48.
Cardiola, Rey, Hist. Nat. Col. Fr., Brév. Myr. 2e part, p. 452.

This genus, as it exists at present, comprises about sixty species, and has an almost cosmopolitan distribution. It must, however, undergo dememberment; for examination proves that those European forms for which the name was first proposed possess the remarkable peculiarity of having the prosternum behind the front coxæ entirely corneous, whereas in many other forms that have been included in the genus it is entirely membranous; these latter forms must therefore be removed from *Falagria*, and only such species as exhibit the remarkable peculiarity I have just mentioned should be retained in the genus. The prosternum in *Falagria* consists of three parts:—a part in front of the coxæ, and consequently exposed when the legs are in their natural position; this may be called the antecoxal portion, and it is prolonged backwards, the prolongation being, however, concealed by the coxæ, so that a removal of the limb is necessary for its display; this prolonged and concealed portion is usually marked off by a distinct raised transverse line, which may be called from its position the supracoxal portion; the third or posterior part of the corneous prosternum is formed by the development of two horny plates which meet in the middle line, and also approach so closely in front to the supracoxal portion that they are separated from it by only a very short transverse chink, or appear, indeed, to be contiguous with it; this portion will naturally be called the postcoxal portion, and is of a very unusual character; the two plates by which it is formed may either be actually connected with the sides of the pronotum, or may be slightly separated therefrom. The former is the case in the majority of the species; but the latter is apparently the condition existing in *F. inornata.* Where the separation from the side of the prothorax exists it is interesting as indicating

that these corneous plates are not the thoracic side pieces, but a transformation of the portion of the prosternum that remains membranous in other Staphylinidæ.

I propose also to separate from *Falagria* those species in which the antecoxal portion of the prosternum is very large, the prothorax being elongate and its front margin greatly rounded, the legs very elongate, with the hind tarsi very long and slender, the basal joint being especially long. This genus, *Stenagria*, will comprise, besides the species here described, *F. fauveli*, Solsky, *F. fovea* and *F. currax*, Sharp. *F. curtipennis*, Sharp, will have to form a distinct genus from any of the above, as it has the hind margin of the mesosternum free, and the postcoxal portion of the prosternum entirely membranous. On the other hand, *Cardiola*, Rey, must be united with *Falagria*, as the characters are not of sufficient importance to justify its separation at present.

Falagria, as thus limited, will still have a very wide distribution in the eastern hemisphere, but in the New World is, so far as my collection goes, not existent in South America.

1. **Falagria infima.**

Parvula, fusca, parum punctata, sat nitida, pedibus testaceis; antennis haud crassis, articulis penultimis transversis; capite subquadrato; prothorace nitidulo, perparum punctato, posterius leviter angustato, dorso profunde canaliculato; scutello obsolete canaliculato; elytris quadratis, quam prothorax paulo longioribus, parum punctatis; abdomine crebre subtiliter punctato.

Long. 2–2¼ millim.

Hab. GUATEMALA, Guatemala city, San Gerónimo, Champerico, Zapote, Rio Naranjo 450 feet, El Reposo 800 feet, Capetillo (*Champion*).—ANTILLES, St. Thomas (*Höge*).

Antennæ rather feeble; third joint distinctly shorter than the second; the four penultimate joints distinctly shorter than broad, the last joint more or less conspicuously paler in colour than those preceding. Head shining and impunctate, about as broad as the thorax, truncate behind. Thorax small, strongly but not abruptly narrowed behind, almost impunctate, with a conspicuous longitudinal channel. Scutellum closely punctate, but only obsoletely channelled. Elytra only distantly and indistinctly punctate. Basal segments of hind body not crenate at base.

A single specimen of this obscure insect, from the Island of St. Thomas, was labelled in Höge's collection as *F. infima*, Fauvel; and I have adopted this name for the species.

2. **Falagria nitidula.**

Elongata, nitidula, parcissime pubescens, nigra, pedibus antennisque fusco-testaceis, harum articulo basali tarsisque testaceis; prothorace elongato-cordato, profunde canaliculato; scutello ecanaliculato; elytris basi crebre punctatis; abdomine perparum punctato.

Long. 3½ millim.

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

Antennæ stout and elongate; the penultimate joints not transverse. Head broad and

short, very shining, more or less impressed in front, rounded, truncate behind. Thorax elongate and narrow, the front margin much rounded, the sides much narrowed behind, the surface very shining black, impunctate, deeply channelled along the middle for the whole length, the posterior part of the channel very broad and deep. Scutellum punctulate, without any trace of channel. Elytra quadrate, about as long as the thorax, the basal portion closely and finely punctulate, the apical nearly smooth. Hind body elongate and narrow, only sparingly and very finely punctate.

A single pair, in extremely fragile condition, has been found: one of the two is probably the male, the larger part of the upper surface of the head being depressed, while the second, third, and fourth joints of the antennæ are apparently more densely setose.

3. **Falagria inornata.**

Parum elongata, subdepressa, parum nitida, crebre punctulata, antennis pedibusque sordide testaceis; prothorace brevi, haud convexo, posterius angustato, obsolete canaliculato; scutello ecanaliculato; elytris æqualiter punctulatis, quam thorax paullo longioribus; abdomine sat lato.

Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ rather short and stout, joints six to ten a little transverse. Head broad and short, truncate behind, feebly punctulate and pubescent. Thorax a good deal longer on the middle than at the sides, so as to be subpentagonal in form, not so long as broad, much narrowed in behind, rather closely but feebly punctulate, with a broad but very shallow impression along the middle, which is deepened in front of the scutellum, but becomes obsolete in front. Scutellum closely punctate, without trace of channel. Elytra rather broad and short, very slightly narrowed towards the shoulders, rather closely and finely punctate. Hind body rather broad and short, very little shining, rather closely punctate. Legs short, rather stout.

This species is very similar in facies to the European *F. nigra* auct., but is much larger. Only a single individual has been found.

4. **Falagria denigrata.**

Falagria denigrata, Er. Gen. et Sp. Staph. p. 52[1].

Hab. Mexico (*Dom. Schleiden*)[1].

I am not acquainted with this species, and am not able from Erichson's description to guess whether it is truly a *Falagria* or not.

5. **Falagria quadrata.**

Parum elongata, subdepressa, nigra, sat nitida, palpis antennarumque basi læte flavis, pedibus fuscis; antennis parum elongatis; prothorace argute canaliculato, parum punctato; elytris sat latis, subtiliter punctatis; abdomine subtiliter parce punctato.

Long. $2\frac{3}{4}$ millim.

Hab. Guatemala, Zapote (*Champion*).

Antennæ rather stout; the four basal joints bright yellow, first and second joints subequal in length, third stout, much shorter, fourth rather small, subquadrate, the seventh to tenth rather strongly transverse. Head broad, nearly as wide as the elytra, truncate behind, the upper surface coarsely punctate in front. Thorax much narrowed behind, with a very distinct channel along the middle; the channel is not placed in a depression, extends the whole length, and is subfoveolate in front of the scutellum. This latter is punctate, but without carinæ or channels. Elytra a little longer than the thorax, not standing out much from the body, finely punctate, the punctuation denser at the base round the scutellum. Hind body subparallel, very little narrowed at the base, finely punctate, the transverse depressions on the basal segments very little developed.

Only two individuals have been found of this species. I am not able to discover exactly the structure of the prosternum; but the posterior portion is evidently corneous.

CHITALIA.

Genus *Falagriæ* persimile, sed mesosterni margine posteriore libero, in medio inter coxas intermedias haud producto.

Besides the four species here ascribed to this genus, it will probably comprise some of the North-American species at present referred to *Falagria*. The prosternum in these insects is, as in *Falagria*, entirely corneous behind. In many other characters the genus also agrees with *Falagria*; but the mesosternum has its hind margin approximating somewhat to the structure we find in *Autalia*, its hind margin being on a rather different level to the pieces behind it, and thus appearing free, while in the middle it is not produced backwards between the coxæ, but forms only a very obtuse angle.

1. Chitalia crenata.

Fusco-rufa, nitida, parum dense sed distincte pubescens, parum punctata; antennis crassiusculis, articulis penultimis vix transversis; prothorace subcordato, medio profunde sulcato; scutello canaliculato; elytris quam thorax longioribus, perparum punctatis, tenuiter pubescentibus; abdominis segmentis 1°–3ᵐ basi transversim depressa et crenata; pedibus testaceis.

Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Jalapa (*Flohr*), Guanajuato, Cordova, Toxpam (*Sallé*); Guatemala, Guatemala city, San Gerónimo, Capetillo, Coban and Senahu (*Champion*).

The head is short and broad, subtruncate behind, usually darker than the other parts, of a shining black or brassy black colour, not punctate. The antennæ are rather long and stout, variable in colour from nearly red to nearly fuscous, the basal and apical joints being somewhat paler than the others. The thorax is rather broader than long, rounded in front, very greatly narrowed behind, and is traversed by an extremely deep longitudinal groove. The transverse depressions on the basal segments of the hind body are deep, and their crenulation is very distinct.

This appears to be a common species. Mr. Flohr's specimens were found in garden-refuse; the colour is subject to considerable variation. It has quite the facies of the European *F. thoracica* and *F. sulcata*; but the structure of the mesosternum really calls for its generic separation; the hind margin of this part presents itself as a free raised edge, and is not produced backwards between the middle coxæ; the middle coxal cavities have no definite border internally, and are rather widely separated.

2. **Chitalia granigera.** (Tab. VI. fig. 8.)

Fusco-rufa, capite thoraceque fere subænescentibus, parum dense sed distincte pubescens, nitida; antennis crassiusculis, fuscis; prothorace subcordato, basi abrupte fortiterque constricta, dorso canaliculato crebreque granuloso-punctato; scutello canaliculato; elytris quam thorax longioribus, perparum punctatis, tenuiter pubescentibus; abdominis segmentis 1°–3ᵐ basi fortiter sculpturata; pedibus testaceis.
Long. 4 millim.

Hab. GUATEMALA, Guatemala city, Capetillo, Aceituno, Coatepeque 1300 feet, Senahu, El Tumbador 2500 feet (*Champion*); PANAMA, Bugaba 800 to 1500 feet (*Champion*).

This species is remarkable by the granulose punctuation on the middle of the thorax; the thoracic channel is not so largely developed as it is in *C. crenata*, but is deeper and broader in certain specimens, which are probably males; the sculpture on the basal abdominal segments is largely developed, and is accompanied by minute elevated granules behind the large crenulations; even the fourth segment is crenulate at the base.

It is closely allied to a North-American species (probably *Falagria bilobata*, Lec. & Say), but has the antennæ less elongate; the more northern species has the thorax more gradually narrowed behind, and the basal portion of the wing-cases rather closely punctate.

3. **Chitalia debilis.**

Fusca, parum nitida, crebre subtiliter punctulata et pubescens, pedibus testaceis; antennis crassiusculis; prothorace subcordato, dorso convexo, simpliciter canaliculato; scutello canaliculato; elytris quam thorax paulo longioribus, subtilissime sat crebre punctulatis; abdominis segmentis 1°–3ᵐ basi sculpturatis.
Long. 3 millim.

Hab. GUATEMALA, Rio Naranjo 450 feet (*Champion*); PANAMA, Bugaba 800 to 1500 feet (*Champion*).

This species appears to be very closely allied to *C. dubia*, but is of narrower form and more obscure colour, the prothorax and basal abdominal segments not being rufescent; the sculpture at the base of the first three abdominal segments is finer; and the prothorax is more gradually narrowed behind, and along the middle has a simple channel, not a broad impression.

A single individual from each of the two localities is all I have seen.

4. **Chitalia dubia.**

Fusco-rufa, nitida, parum dense sed distincte pubescens, parum punctata; antennis crassiusculis, articulis penultimis transversis; prothorace subcordato, medio late profundeque sulcato; scutello canaliculato; elytris quam thorax longioribus, perparum punctatis, tenuiter pubescentibus; abdominis segmentis 1°–3ᵐ basi transversim depressis et crenatis; pedibus testaceis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Guatemala city, San Gerónimo, Capetillo, Rio Naranjo 450 feet (*Champion*).

This species is very closely allied to *Chitalia crenata*; but its individuals are of considerably smaller size, and the antennæ are less elongate. It varies in colour and size in a manner similar to *F. crenata*; it has the thoracic groove more developed than has the larger species; and in certain individuals, probably the males, this depression becomes very broad, so as to occupy the larger part of the surface of the prothorax.

STENAGRIA.

Prosternum totum corneum, ante coxas magnum. Tarsi anteriores 4-, intermedii et posteriores 5-articulati.

This genus, closely allied to *Falagria*, is distinguished by the much larger antecoxal portion of the prosternum; this development is accompanied by a greater elongation of the anterior part of the pronotum; and the prothorax above thus approximates in form to the oval; the supracoxal part is not separated by any raised line from the antecoxal part, but is strongly reflexed, so that it assumes a direction nearly at right angles to the plane of the anterior piece; the postcoxal piece is very large, and so completely amalgamated with the supracoxal piece that the line of junction between the two cannot be detected. The genus appears to be the most highly developed form of the *Falagria* group of genera; and the prosternal characters are accompanied by other, slighter characters which give to the species of the genus a facies by which they may readily be identified. The head is rounded behind, is borne on a very slender neck, and is much detached from the prothorax; the slender prothorax is channelled along the middle, and the shoulders of the after-body are quite free, there being great capacity for motion at the articulation between the pro- and the mesothorax. The hind body is distinctly narrowed at the base. The mesosternum is produced in the middle between the coxæ, much as in *Falagria*; the side pieces of the metasternum are very broad behind. The legs are remarkably elongate and slender; the basal joint of the slender filiform hind foot is very long, being fully equal in length to the following three together.

In addition to the species here enumerated, the genus will contain, as I have already remarked, several others previously described as *Falagriæ*, but is foreign to Europe, where its nearest ally appears to be *Echidnoglossa*, Woll. I am not acquainted with any North-American representative of the genus; but I think it probable from the description that *Falagria cingulata*, Lec., belongs to it.

The characters have been drawn more especially from *S. gracilipes*; and it is not improbable that *S. paræ* and *S. humeralis* will ultimately prove generically distinct.

Broun has recently described an insect (Man. N. Zeal. Col. p. 95) from New Zealand under the generic name of *Stilicioides*; and M. Fauvel has identified for me as Broun's species an insect that will have to be placed in *Stenagria*. Broun's description contains, however, none of the special characters of *Stenagria*; and as its author has made a mistake as to the number of joints in the front tarsi, and as the name *Stilicioides* has a trivial rather than a generic appearance, I have not thought it advisable to adopt his denomination for the genus—the name being at the time and in the manner it was proposed a synonym of *Falagria*, accompanied by a description erroneous as to one of the most important points of structure.

1. **Stenagria gracilipes.** (Tab. VI. fig. 9.)

Elongata, fusco-nigra, tenuiter pubescens, nitida, antennarum articulo basali pedibusque fuscis; prothorace elongato-cordato, profunde canaliculato, parum punctato, nitidulo; elytris parce punctatis; abdomine crebre subtiliter punctulato.

Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. Mexico, San Andres, Chalchicomula (*Sallé*); Guatemala, Quiche Mountains 7000 to 9000 feet, Balheu, Capetillo (*Champion*); Panama, Volcan de Chiriqui 8000 feet (*Champion*).

Antennæ elongate, longer than head and thorax, moderately stout, each joint longer than broad; third joint equal to second; each joint from the fourth to the tenth shorter and a little broader than its predecessor; the basal joint rather paler in colour than the others. Head rounded behind, shining, and almost impunctate. Thorax longer than broad, very rounded in front, narrowed gradually behind; so that it forms an oval slightly truncate in front, more broadly truncate behind; along the middle there is a deep channel; and the sides of this channel are rather closely punctate; elsewhere it is almost impunctate. Scutellum punctate, without channel. Elytra broad, about as long as the thorax, sparingly punctate. Hind body rather broad, distinctly narrowed at the base, finely and rather closely punctate, at the base of the basal segment there is a curved impression (the convexity of the curve being backwards); and this impression is shining and rather indefinitely punctate; the two following segments bear each an impression similar, except that it is straight. Legs very long and slender.

The three individuals from Mexico are rather paler in colour than those from Guatemala, are rather more punctate, and have the hind angles of the thorax slightly less rounded; but these characters are not sufficiently striking to lead me to suppose at present that they have specific importance.

The individuals from Panama also form a variety, in which the longitudinal depression along the middle of the thorax is less broad and deep than in the Mexican and Guatemalan varieties.

2. **Stenagria opacula.**

Elongata, parum convexa, fusco-rufa, opaca, obsolete punctata; thorace elongato, canaliculato; abdomine latiusculo, parce obsoleteque punctato, subnitido.
Long. 4½ millim.

Hab. MEXICO, Cordova (*Höge*).

Antennæ elongate; third joint rather longer than second; penultimate joint scarcely longer than broad. Head, thorax, and elytra not visibly punctate, but quite dull owing to the surface being very densely and finely alutaceous; the head quite rounded behind. Thorax with a very definite channel, which does not extend to the front, the front much rounded, the sides gradually narrowed to the base. Elytra broad, with prominent free shoulders, about as long as the thorax. Legs very elongate. Basal abdominal segment with a curved impression.

This species is peculiar by the excessively fine sculpture of the anterior parts, by which they are made quite dull. The three individuals found by Höge are extremely similar to one another.

3. **Stenagria constricta.**

Elongata, nitidula, fere impunctata, nigra, pedibus basi apiceque testaceis, antennarum basi fusco-rufa; abdominis subtus convexi basi constricta, segmento basali testaceo, magno, in medio arcuatim impresso.
Long. circ. 3½ millim.

Hab. GUATEMALA, Chacoj in Vera Paz (*Champion*).

Of this remarkable species I have before me only an example in fragments found among Mr. Champion's duplicates. The basal joints of the antennæ are elongate and slender; the others are lost. The head is elongate and much narrowed behind the eyes, its surface polished and impunctate. Thorax elongate and narrow, the front slightly emarginate, the front portion twice as broad as the elongate and narrow basal portion; along the middle runs a very deep and broad depression; the surface is shining and impunctate. Elytra broad and short, scarcely so long as the thorax, shining and impunctate. Hind body very convex beneath, and narrow at the base, so that it is there very constricted and mobile; the basal segment is yellow, and appears to be a good deal longer than the others, and has at the base in the middle a large, deep, curved impression. Legs elongate and very slender, nearly black, trochanters pale, and the tibiæ towards the extremity and the tarsi pale.

Although this insect is very remarkable by the shape of the head, prothorax, and abdomen, yet the peculiarities it exhibits are evidently only an exaggeration of what we find in *S. gracilipes*; the exaggeration, however, is great; and should intermediates not be found, the insect will prove to be the representative of a very distinct genus.

4. **Stenagria paræ.** (Tab. VI. fig. 10.)

Falagria paræ, Sharp, Tr. Ent. Soc. Lond. 1876, p. 41 [1].

Hab. GUATEMALA, Zapote, El Reposo 800 feet (*Champion*); PANAMA, Bugaba (*Champion*).—SOUTH AMERICA, Para [1].

5. **Stenagria humeralis.**

Nigra, nitidula, elytrorum abdominisque basi pedibusque testaceis, his femoribus nigris; antennis gracilibus, articulis nullis transversis, basi fusco-testacea, articulo ultimo rufo-testaceo; prothorace elongato-cordato, medio canaliculato, parum punctato; elytris subtilius punctatis; abdomine sat crebre punctato.

Long. 3 millim.

Hab. GUATEMALA, Balheu (*Champion*).

This species is closely allied to *S. paræ*; but the individuals are larger and of darker colour, and have the antennæ considerably more elongate, these being about as long as head, thorax and elytra; and their penultimate joint is a good deal broader than long. The scutellum is extremely indistinctly bicarinate.

Three individuals, quite similar to one another, were found of this species.

Falagria divisa and *F. concinna*, Er., two Brazilian species, appear from Erichson's descriptions to be allied to *S. humeralis* and *S. paræ*, and should no doubt be referred to *Stenagria*.

Group **BOLITOCHARINA.**

The anterior and middle tarsi four-, the posterior five-jointed.

EPIPEDA.

Epipeda, Rey, Muls. et Rey, Hist. Nat. Col. Fr., Aléochariens, Bolitocharaires, p. 136 (1871).

This genus was established for a single European species of subcortical habits. Fauvel has recently expressed doubts as to the validity of the genus, suggesting that the intermediate feet are really five-jointed, and that *Epipeda* should be merged in *Thectura*. I have, however, by mounting the trophi and feet of *E. plana* in Canada balsam, satisfied myself that Rey is quite correct in his statement as to the tarsal structure and the biarticulate labial palpi, and there is no doubt that the insect is correctly placed in the neighbourhood of *Silusa*. The numerous species here described show some variations in their structural characters, especially as regards the space separating the intermediate acetabula; but I have not been able to find any good characters for valid genera among them at present.

1. **Epipeda rufa.** (Tab. VI. fig. 11.)

Epipeda rufa, Sharp, Trans. Ent. Soc. Lond. 1876, p. 46[1].

Hab. GUATEMALA, Las Mercedes 3000 feet, Zapote (*Champion*).—SOUTH AMERICA, Amazon valley [1].

The series sent home by Mr. Champion shows that this species varies somewhat in

colour, the rufescent portions of the body being in some individuals nearly or quite black.

The figure is drawn from a specimen from Las Mercedes.

2. Epipeda longula.

Angustula, depressa, parallela, opaca, dense subtilissime punctulata, rufescens; antennis, elytris pedibusque testaceis, abdomine ante apicem fusco; prothorace subquadrato, plano, medio obscure longitudinaliter depresso.
Long. 2 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ rather elongate; third joint as long as second; fourth smaller than those contiguous, as long as broad; the following joints not transverse. Head rather narrow, much narrower than the thorax; this latter about as long as broad.

Although very closely allied to *E. rufa*, this unique specimen seems to indicate a distinct species; for, besides the clearer colour, the head is considerably narrower.

3. Epipeda minuta.

Angusta, parallela, subdepressa, opaca, dense subtilissime punctulata, fusca; antennarum basi, elytris, abdominis apice pedibusque testaceis; prothorace rufo-obscuro; capite parvo, vertice subconstricto.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote, Pantaleon 1700 feet (*Champion*).

Antennæ rather short, not stout; fourth joint small, fifth to tenth similar to one another, transverse; terminal joint rather short. Head much narrower than the thorax, a little constricted at the vertex, so as to form a very broad neck. Thorax transversely subquadrate, very densely and finely punctulate. Elytra longer than the thorax, closely and finely punctate. Hind body parallel, closely and finely punctate, yellow at the extremity.

This insect is only half the size of *E. rufa*, is less depressed, and has a much smaller head. Only a single individual from each locality has been sent; that from Pantaleon is brighter in colour than the one described; so that probably the species is variable in colour, like *E. rufa*.

4. Epipeda minor.

Angustula, parallela, depressa, opaca, dense subtilissime punctulata, fusco-rufa; antennarum basi, elytris, pedibus abdominisque apice testaceis; capite subquadrato, prothoracis fere latitudine.
Long. $1\frac{1}{4}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ short; third joint small, fourth likewise small, rather strongly transverse; fifth to tenth similar to one another, each rather strongly transverse; terminal joint short. Head rather large, broad and flat, straight at the sides, and only very minutely

constricted at the vertex. Thorax transversely subquadrate, very densely and finely punctulate. Hind body parallel, closely punctate.

The form of the head readily distinguishes this very minute insect from *E. minuta*. Only two specimens have been found.

5. Epipeda brevicornis.

Angustula, dense subtilissime punctulata, opaca, abdomine ad apicem nitido, fusco-rufa; antennarum basi, elytris pedibusque testaceis; antennis brevibus; capite sat elongato, pone oculos subangustato.

Long. 1½ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ short, rather stout; third joint small, much shorter than the second; fourth quite small, transverse; fifth to tenth similar to one another, each rather strongly transverse; terminal joint small. Head rather elongate and narrow, flat, slightly narrowed behind the rather large and prominent eyes, very densely punctate, dull. Thorax nearly as long as broad, a little narrowed behind, but with the hind angles distinct, a little depressed longitudinally along the middle, excessively densely and finely punctate, quite dull. Elytra densely and finely punctate, longer than the thorax. Hind body elongate and narrow, the basal segments densely punctate, the apical ones impunctate.

Of this very minute insect only a single example has been found; it has three elevated granules near the hind margin of the sixth dorsal plate, and is probably a male; the seventh segment cannot be seen. The number of joints in the tarsi has not been ascertained; the middle coxæ are nearly but not quite contiguous.

6. Epipeda delicatula.

Angustula, sat elongata, parum depressa, omnino dense subtilissimeque punctulata, peropaca, fusca; antennis fusco-testaceis; pedibus testaceis; capite minore, subrotundato.

Long. 1½ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ not elongate, and only moderately stout; third joint small, much shorter than second; fourth small, not so long as broad; fifth to tenth transverse; terminal joint short, stout and obtuse. Head rather narrower than the thorax: this latter transversely subquadrate, straight at the sides, with the hind angles distinct; the surface even, without depressions, rather convex, like the head excessively densely and finely punctate, quite dull. Elytra elongate, longer than the thorax, very densely and finely punctate, quite dull. Hind body narrow and elongate, very densely and evenly punctate, dull.

This extremely minute insect has a very Trogophlœoid appearance; the middle coxæ are rather widely separated; and, so far as I can judge, it is really congeneric with *E. rufa*. Only one specimen has been found.

7. Epipeda pumila.

Minutissima, depressa, parum elongata, dense subtilissime punctulata, opaca, fusca, antennarum basi pedibusque testaceis; antennis breviusculis, articulis 4°–10^{m} transversis; capite suboblongo; prothorace postice angustato.

Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, Las Mercedes 3000 feet (*Champion*); PANAMA, Bugaba (*Champion*).

Antennæ with the third joint small, much shorter than the second; fourth to tenth strongly transverse; terminal joint rather small. Head parallel-sided, nearly as broad as the thorax; this latter nearly as long as broad, a little narrowed behind, and with the base much rounded, the hind angles quite indistinct. Elytra longer than the thorax, like it and the head excessively densely and finely punctate and pubescent after the manner of the *Trogophlœi*, quite dull. Hind body rather short, a little narrower at the base than near the extremity, closely and very finely punctate, but not so densely and indistinctly as the anterior parts, and not so dull; the apical segments only sparingly punctate.

Several individuals of this species have been found. It is one of the most minute of the family; and I have not been able to count the joints of the tarsi. The middle coxæ are slightly but minutely separated; and I anticipate that the insect should really be placed in *Epipeda* rather than in *Homalota*, though a knowledge of the trophi and tarsi is necessary to settle this.

8. Epipeda sordida.

Depressa, subtilissime punctulata, anterius opaca, abdomine apicem versus nitido, nigra; antennarum basi pedibusque testaceis, elytris fusco-testaceis; capite plano, post oculos subangustato; prothorace depresso, basin versus angustato, medio subdepresso.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Guatemala city and San Gerónimo (*Champion*).

Antennæ of moderate length and not stout, but little thickened towards the extremity; third joint rather long, about equal to the second; fourth quadrate; fifth to tenth slightly transverse; terminal joint rather large. Head very dull, flat, densely and quite indistinctly punctate. Thorax rounded at the sides and narrowed behind, quite dull, almost invisibly punctate, obscurely depressed along the middle. Elytra of an infuscate yellow colour, extremely finely, moderately closely punctate. Hind body rather broad; the basal segments indistinctly, moderately closely punctate; the apical ones almost impunctate. Legs yellow, the femora slightly infuscate.

This insect has a similarity of facies to the European *E. plana*; and the middle coxæ are very nearly contiguous, as in that insect. A small series of about a dozen examples has been found; but I do not observe any sexual marks.

9. **Epipeda puncticeps.**

Sat lata, depressa, anterius opaca, abdomine nitido, nigra, antennarum basi femoribusque fuscis, elytris, tibiis tarsisque testaceis; capite elongato, plano, post oculos angustato; prothorace basin versus angustato, dorso deplanato.
Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Las Mercedes 3000 feet, Cahabon (*Champion*).

Antennæ rather stout; third joint of moderate length, nearly equal to the second; fifth to tenth rather strongly transverse. Head large and flat, evidently narrowed behind the eyes, the surface densely and coarsely punctate, but the punctures only slightly impressed. Thorax not quite so long as broad, distinctly narrowed behind, quite dull; the punctuation almost invisible, the middle flattened. Elytra rather longer than the thorax, sordid yellow, very finely punctate. Hind body with the two basal segments rather sparingly punctate, the next still more sparingly, the apical ones almost impunctate.

Although very similar to *E. sordida*, this species is distinct, not only by the larger size and the more coarsely sculptured head, but also by the middle coxæ being more widely separated. Only two individuals have been found.

10. **Epipeda debilis.**

Depressa, subtilissime punctulata, nigra, elytris pedibusque testaceis, antennis fuscis, basi dilutiore; capite opaco, plano, post oculos subangustato; prothorace basin versus subangustato; abdomine basi crebre, apice parce punctato.
Long. $1\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

This insect is very closely allied to *E. sordida*; but the size is less, the head is smaller, and the antennæ are more slender. These latter organs are not elongate, and are but little thickened outwardly; the third joint is shorter than the second; the fourth small and about quadrate; the fifth is slightly, the tenth joint more distinctly transverse; the terminal joint is of moderate length, about as long as the two preceding together.

Only two individuals have been found.

11. **Epipeda longiceps.**

Sat depressa, angustula, subtilissime punctulata, anterius opaca, abdomine apicem versus nitido, nigra; antennarum basi fusca, elytris pedibusque testaceis; capite plano fere angustulo, post oculos subangustato; prothorace quam elytra angustiore, lateribus subrotundatis.
Long. $1\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba 800 to 1500 feet (*Champion*).

Antennæ rather elongate, only slightly thickened towards the extremity; third joint shorter than second, fourth quite as long as broad, the fifth quadrate, the three or four penultimate joints a little transverse; tenth joint rather large, as long as the two

preceding together. Head rather narrow and elongate, distinctly narrowed behind the eyes, flat, with a dense obsolete punctuation. Thorax about as long as broad, narrower than the elytra, only a little narrowed behind, but distinctly rounded at the sides, dull, scarcely visibly punctulate. Elytra of a yellow colour, rather longer than the thorax, extremely finely punctate. Hind body at the base rather closely punctate, towards the extremity quite sparingly punctate and shining.

This insect is closely allied to *E. sordida* and *E. debilis*, but is of considerably narrower form, with narrower thorax and more slender antennæ. Only a single individual has been found.

12. **Epipeda angusticeps.**

Subdepressa, angustula, subtilissime punctulata, abdomine nitido, parum punctato, rufo-obscura; capite angusto, nigricante, post oculos angustato; prothorace quam elytra angustiore, lateribus subrotundatis, angulis posterioribus indistinctis.

Long. $1\frac{7}{8}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, Cubilguitz, Purula (*Champion*).

Antennæ of moderate length and thickness, obscure red, paler at the base; third joint rather shorter than the second, fourth nearly quadrate, fifth to tenth each a little transverse; terminal joint hardly as long as the two preceding together. Head narrow, narrower than the thorax, much narrowed behind the eyes; the surface dull, with obsolete punctuation. Thorax not quite so long as broad, excessively finely punctulate. Elytra rather longer than the thorax, densely and extremely finely punctate. Hind body with an excessively fine obsolete sculpture at the base of each of the second and third segments, but, except for this, almost impunctate. Legs clear yellow.

The middle coxæ in this species are rather broadly separated, and the genæ are distinctly margined. By its facies, and not improbably by its characters, this insect connects the aberrant *E. discedens* with the other forms of the genus. Five individuals have been found: two of them, from Cerro Zunil, agree closely as above described, while a third from the same locality is smaller with rather shorter thorax, and the two individuals from the other localities are slightly discordant in some minute points.

13. **Epipeda discedens.**

Brunnea, capite antennisque obscurioribus, his basi rufa, pedibus testaceis; capite angustulo, post oculos angustato, fortiter, obsolete punctato; prothorace transverso, quam elytra angustiore, lateribus rotundatis, omnium dense obsoletissime punctulato.

Long. 3–$3\frac{1}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ somewhat elongate and stout; third joint elongate, as long as the second; fourth smaller than the others, quite as long as broad; the fifth is longer than broad,

the tenth scarcely so long as broad; terminal joint rather large, acuminate, paler at the tip. Head nearly black, narrow, narrowed behind the eyes; the surface quite dull, covered with coarse extremely lightly impressed punctures. Thorax evidently broader than long, rounded at the sides and slightly narrowed behind, a good deal narrower than the elytra; the hind angles obtuse, the surface dull, with an invisible sculpture. Elytra longer than the thorax, dull, excessively finely punctate. Hind body without punctuation, but with a peculiar fine reticulate sculpture at the base of the second, third, and fourth segments.

This peculiar insect has not the depressed form of *E. plana*, but has a somewhat Trogophlœoid appearance. The labial palpi are elongate and rigid, as in *Silusa*; and the ligula is very elongate and slender and minutely bifid at the extremity; the middle coxæ are moderately widely separated; the metasternum is much produced between them, and quite meets the metasternal process, by the apex of which indeed it is overlapped; the apex of the prosternal process is bluntly acuminate; the genæ are distinctly margined. A good series of the species has been obtained.

14. **Epipeda reyi.** (Tab. VI. fig. 12.)

Angustula, rufo-obscura, capite nigricante, antennarum basi rufa, pedibus testaceis; capite dense fortiterque punctato, post oculos angustato; thorace transverso, posterius angustato, in medio longitudinaliter tri-impresso.

Long. $2\frac{3}{4}$ millim.

Hab. GUATEMALA, El Tumbador (*Champion*).

Antennæ rather stout; third joint nearly as long as the second; fifth to tenth joints differing little from one another, each about as long as broad. Head rather small, narrowed behind the eyes, nearly black, coarsely and closely punctate. Thorax narrower than the elytra, somewhat rounded at the sides and narrowed behind, dull, invisibly punctate, with an angular impression in front on the middle, and two elongate impressions behind this. Elytra longer than the thorax, closely and finely punctate. Hind body with the basal segments obscurely punctate, the others smooth. Legs pale yellow.

Although similar in facies to *E. linearis*, this species is readily identified by the peculiar thoracic impressions, which considerably increase its Trogophlœoid aspect. I have named the insect as a tribute to the value of M. Cl. Rey's labours on the extremely difficult and unattractive group of which it is a member.

15. **Epipeda linearis.**

Angustula, rufescens, capite angusto, post oculos angustato, dense, obsolete punctato; prothorace transverso, posterius leviter angustato, obsoletissime punctato; abdomine basi subpunctato, præterea lævigato.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

Antennæ rather short, red; third joint shorter than the second; fourth quadrate; fifth slightly, tenth more strongly transverse. Head rather narrow and elongate, very dull, a little darker in colour than the other parts, and with a close, rather coarse, but very slightly impressed, indistinct punctuation. Thorax a little narrower than the elytra, broader than long, a little rounded at the sides, and slightly narrowed behind, a little deplanate along the middle, dull, sculpture invisible. Elytra rather longer than the thorax, finely and indistinctly punctate. Hind body on the two or three basal segments with a slight sculpture, which is rather a slight roughening of the surface than a true punctuation; except for this, impunctate.

This species differs from *E. reyi* by the absence of the thoracic impressions, as well as by other less conspicuous characters; the sternal structure is much the same as in *E. reyi*, except that the mesosternal process is a little longer in *E. linearis*. Only one individual has been found.

DIESTOTA.

Diestota, Mulsant et Rey, Opusc. Ent. cah. xiv. p. 194; Hist. Nat. Col. Fr., Brévipennes, Bolitoch. p. 97.

Although but recently established for a rare and minute South-European species, this genus seems likely to prove of considerable extent, as I have lately added to Rey's species another from South America and several from the Hawaiian islands.

1. **Diestota funesta.**

Latiuscula, fusco-nigra, antennarum basi, elytris pedibusque fusco-testaceis; capite thoraceque dense obsolete punctatis, opacis; abdomine parce punctato, nitidulo.
Long. 3 millim.

Hab. Mexico (*Truqui*).

Antennæ stout; third joint shorter than second; fourth quadrate, a good deal smaller than the fifth, this being transverse, while the following joints are very strongly transverse; terminal joint large, obtuse at apex. Head broad, but a good deal narrower than the elytra, extremely dull, owing to an excessively close almost imperceptible sculpture. Thorax rather narrower than the elytra, strongly transverse, with a sculpture similar to that of the head, but not quite so extremely fine, with scarcely any trace of a basal impression. Elytra greatly longer than the thorax, finely punctate, a little shining. Hind body broad and parallel; the basal segments sparingly punctate, the apical almost impunctate.

This insect is larger and broader than any individuals of *D. sperata*, and is readily enough distinguished by the different punctuation. The unique specimen described may possibly be a male, as the hind margin of the seventh dorsal plate appears a little truncate in the middle; but I think it is more probable that it is a female.

2. **Diestota crassa.**

Picea, sat nitida; antennarum basi, pedibus elytrisque testaceis, his transversim in medio infuscatis; antennis brevibus, crassis, articulis 4°–10^{m} fortiter transversis; elytris brevibus sed quam prothorax longioribus, fortiter punctatis; abdomine parce punctato, subtus convexiusculo.

Long. 2 millim.

Hab. Guatemala, Paraiso 300 feet (*Champion*).

Antennæ short and very stout; the three basal joints yellow, the rest darker; third joint rather shorter than second; fourth not quite so broad as the following ones, but strongly transverse; fifth to tenth similar to one another, each very strongly transverse; terminal joint large, very obtuse. Head very short and broad, with large eyes, imperceptibly punctate. Thorax very broad and short, more than twice as broad as long, very feebly punctate, with a basal transverse impression. Elytra broad and short, yellow, with a large vague cloud of darker colour across the middle, rather coarsely punctate. Hind body sparingly punctate, the apical segments still more sparingly than the basal ones.

Of this distinct species five individuals have been found. The male has on the sixth dorsal plate two elongate, slightly curved, raised lines, and between them a small tubercle; the following segment is longitudinally bituberculated in the middle, and at each outside has a raised straight line, which is continued backwards to form a small projecting spine.

3. **Diestota laticornis.**

Brevis, subparallela, subtilissime punctata et pubescens, nigra; antennarum basi pedibusque testaceis; elytris fuscis ad humeros testaceo-maculatis, vel fusco-testaceis; prothorace fortiter transverso, basi in medio transversim impressa, angulis posterioribus distinctis.

Long. 2 millim.

Hab. Mexico, Teapa and Cordova (*Sallé*); Guatemala, Cahabon (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba 800 to 1500 feet (*Champion*).

Antennæ short; the two or three basal joints obscure yellow; third joint rather short, shorter than the second; fourth small, not so long as broad; fifth considerably broader than fourth; fifth to tenth differing very little from one another, strongly transverse; terminal joint large, obtuse, quite as long as the two preceding together. Head broad and short, scarcely visibly punctulate. Thorax strongly transverse, about twice as broad as long, straight at the sides, the base rather rounded, so that the hind angles, though well marked, are obtuse; the surface is very finely punctate; and in front of the scutellum there is an obscure transverse depression. Elytra short, but distinctly longer than the thorax, finely punctulate. Hind body parallel, the basal segments not closely punctate, and the penultimate still more sparingly.

The male has on the hind margin of the seventh dorsal plate six closely placed linear teeth with blunt terminations, and on each side and more remote a rather longer, slender, acuminate, slightly curved spine.

This insect has much the appearance of such species of *Homalota* as *H. testaceipes*, Heer. According to the series before me, it varies somewhat in size and in colour, more especially in the colour of the wing-cases, which sometimes have only a small pale humeral spot, while in other cases the yellow colour extends itself in a vague manner over the greater part of the wing-case.

4. **Diestota foveata.**

Fusco-rufa, capite abdominisque apice nigricantibus, antennarum articulo basali pedibusque rufis; antennis brevibus, apicem versus incrassatis; prothorace fortiter transverso, basi in medio profunde foveolata; abdominis segmentis basalibus sat crebre punctatis.

Long. 2 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Third joint of antennæ a good deal shorter than the second, fourth rather small, fifth to tenth transverse; terminal joint large. Head nearly black. Prothorax very strongly transverse, twice as broad as long, with a conspicuous depression in front of the scutellum. Elytra greatly longer than the thorax, closely and finely punctate. Hind body with the two or three basal segments rather sparingly punctate, the penultimate segments almost without punctuation.

This insect is similar to *D. sperata*, but is of less depressed and less parallel form, with the head a little different in shape (the narrowing of it behind not commencing so close to the eye), the antennæ shorter, and the hind body less closely punctate.

Only a single individual has been found.

5. **Diestota proxima.**

Angustula, subparallela, dense punctulata et pubescens, nigra, elytris fuscis; abdomine rufo, segmentis quarto et quinto nigris, apice cum pedibus testaceis; antennis fere gracilibus, fuscis, articulo basali dilutiore.

Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Las Vigas (*Flohr*).

Antennæ not elongate, but rather slender; third joint elongate, equal to second; fourth to tenth similar to one another in length, but each slightly broader than its predecessor; the first of these rather longer than broad, the last decidedly transverse; terminal joint elongate. Thorax black, strongly transverse, slightly rounded at the sides and but little narrowed behind, very densely punctate. Elytra densely and very finely punctate. Hind body with the basal segments closely and distinctly punctate, the sixth segment nearly impunctate.

In the male the seventh dorsal plate of the hind body has in the middle four parallel slender teeth, and at each outside another tooth, which differs only very slightly from the mesial teeth.

Although I have seen but a single individual of this species, and although it is extremely similar to the variable *D. sperata*, I have no doubt that *D. proxima* is distinct. The thorax of *D. proxima* is less transverse, and is black in colour, and the fourth joint of the antennæ is more elongate.

6. **Diestota sperata.**

Diestota sperata, Sharp, Trans. Ent. Soc. Lond. 1876, p. 47 [1].

Hab. GUATEMALA, Cerro Zunil, 4000 to 5000 feet, Tamahu, Capetillo and Guatemala city (*Champion*); PANAMA, Bugaba (*Champion*).—SOUTH AMERICA, Amazon valley [1].

7. **Diestota brevicornis.**

Rufescens, antennarum basi pedibusque testaceis, capite, antennis abdomineque ante apicem fuscis, elytris fusco-testaceis humeris dilutioribus; minus subtiliter pubescens, parce punctata, sat nitida; antennis brevibus, apicem versus incrassatis, articulis 5°–10^{m} transversis.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ short and rather stout, much thickened towards the extremity; third joint short, shorter than second; fourth smaller than any of the others, hardly so long as broad; fifth to tenth short, each of them transverse and a little broader than its predecessor, so that the tenth joint is moderately transverse, terminal joint not large. Head short and broad, narrowed behind the eyes, very indistinctly punctate, rather shining. Thorax strongly transverse, very nearly as broad as the elytra, scarcely visibly punctate, finely pubescent, shining, with a small transverse depression in front of the base in the middle. Elytra a good deal longer than the thorax, of an infuscate-yellow colour, with a more or less vague paler humeral spot of variable extent, finely and not closely punctate. Hind body with the basal segments indistinctly and rather sparingly punctate, the apical ones nearly impunctate. Legs clear yellow.

A series of six individuals shows little variation. Compared with *D. sperata* the individuals of this species are seen to be considerably smaller, more sparingly punctate, and more shining, with considerably shorter antennæ. I am only able to get a very imperfect view of the hind margin of the seventh dorsal segment; but I think the structure in the male sex is similar to that of *D. sperata.*

8. **Diestota debilis.**

Parvula, angustula, subtiliter pubescens, parce subtilissime punctulata, sat nitida, rufo-testacea, abdomine ante apicem infuscato; antennis brevibus, apicem versus incrassatis; prothorace omnium brevissimo; abdomine fere impunctato.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Capetillo, Las Mercedes 3000 feet, (*Champion*).

Antennæ quite short, a good deal thickened towards the apex, joints fifth to tenth transverse, the last of them strongly so. Head small, with small eyes, scarcely visibly punctate, shining. Thorax very short, with the sides and base rounded, scarcely visibly punctate, shining, with but slight trace of basal impression. Elytra differing but little

in colour from the rest of the surface, very indistinctly punctate. Hind body with the basal segments only sparingly and indistinctly punctate, the others almost impunctate.

A single individual from each of the localities is all I have seen; the two specimens differ a little in some minute and probably unimportant respects. I am unable to detect any sexual characters.

9. **Diestota docilis.**

Rufo-obscura, parce punctata et pubescens, sat nitida, antennis fuscis, abdomine ante apicem nigro-cingulato, pedibus testaceis; antennis brevibus, extrorsum incrassatis; capite fortiter parum profunde punctato.
Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, San Gerónimo, 3000 feet (*Champion*).

Antennæ fuscous, with the two or three basal joints obscure red; third joint much shorter than second; joints fifth to tenth transverse, the last of them strongly so. Head short, rather small, of an obscure red colour, bearing numerous coarse punctures, which, however, are so shallow as to easily escape observation. Thorax very short and broad, almost impunctate, with a very indistinct basal impression. Elytra much longer than the thorax, rather coarsely punctured. Hind body with the basal segments only very sparingly punctate, the following ones nearly without punctures.

The peculiar punctuation of the head will much facilitate the recognition of this obscure insect; only a single individual has been found.

10. **Diestota nitens.**

Breviuscula, brunneo-testacea, antennarum basi pedibusque testaceis, subglabra, nitidula; prothorace parvo, valde transverso.
Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Senahu (*Champion*).

Antennæ rather slender; third joint rather shorter than second; of joints 4–10, each is a little broader than its predecessor, the first two or three of them not transverse, but the last rather strongly transverse. Head short and transverse, its hind angles distinct, it being in fact borne on a very broad short neck, the surface polished and shining. Thorax a good deal narrower than the elytra, not rounded at the sides, a little narrowed behind, surface polished and shining. Elytra much longer than the thorax, very indistinctly punctured, shining. Hind body broad and short, shining, only very sparingly punctate.

A single individual only has been found. It is in very fragile condition; and I am unable to see the apical portion of the hind body so as to ascertain its structure.

11. **Diestota microps.**

Brevis, rufescens, capite abdominisque apicem versus nigricantibus, antennis extrorsum fuscis; capite parvo, in medio impresso; prothorace fortiter transverso, subtiliter punctulato; abdomine sat crebre, obsolete punctato, minus tenuiter hirtello.
Long. 2 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ rather short and stout, thickened externally; third joint short, shorter than the second; fifth to tenth each a little broader than its predecessor, so that the penultimate joints are rather strongly transverse; terminal joint rather short, not so long as the two preceding together. Head small, only about half as broad as the hind body, nearly black, finely pubescent, shining, with a large impression on the middle in front. Thorax nearly twice as broad as long, narrower than the elytra; hind angles very indistinct; surface very finely punctate, obsoletely impressed at the base in the middle. Elytra broad and short, rather longer than the thorax, extremely finely punctate. Hind body broad and short, the basal segments clear red, behind this nearly black; all the segments very finely punctate. Breast blackish; under surface of head deeply impressed on each side.

This insect has the hind body unusually broad in comparison with the head; this character, in conjunction with the impressed head, will assist in its identification. Two individuals have been found.

12. **Diestota lativentris.**

Brevis, rufescens, antennis extrorsum fuscis, omnium subtilissime punctulata, pube molli erecta vestita; capite parvo, in medio impresso; prothorace transverso, quam elytra multo angustiore; abdomine lato, subtiliter parce punctato.

Long. $2\frac{1}{4}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ stout; basal joint elongate, red, the other joints darker; second short and stout, hardly half as long as the first; third joint short and stout, shorter than the second, nearly as broad as long; fourth rather, tenth very strongly transverse; terminal joint short. Head exserted, but without distinct neck; the eyes are placed quite at the front, and behind these it is distinctly narrowed; in front in the middle it has a large impression. Thorax much broader than long, much narrower than the elytra, very convex transversely in front, the very depressed front angles obtuse and rounded. Elytra longer than the thorax, and like it with a very fine abundant pubescence but without distinct punctuation. Hind body broad, only sparingly and extremely finely punctate, and but little pubescent. Legs pale yellow.

Only a single specimen has been found. It appears to be allied to *D. microps*, but with the peculiarities of that species exagerated.

13. **Diestota funebris.**

Haud depressa, nigra, tibiis basi apiceque dilutioribus, tarsis testaceis; capite, thorace elytrisque densissime punctatis, opacis; abdomine nitido, basi sparsim punctata, apice lævigato.

Long. $3\frac{1}{4}$ millim.

Hab. MEXICO, Guanajuato (*Sallé*).

Antennæ rather stout, not elongate; third joint about as long as the second; fourth and

fifth each about as long as broad, of fifth to tenth each is slightly broader than its predecessor, so that the tenth is rather strongly transverse; terminal joint large and stout, quite as long as the two preceding together. Head broad and short, a good deal narrower than the elytra, very dull, densely and indistinctly punctate. Thorax strongly transverse, narrower than the elytra, straight at the sides, hind angles indistinct; surface densely and obsoletely punctate, extremely dull. Elytra longer than the thorax, very densely punctate, the sculpture not so obsolete as that of the thorax. Hind body with the basal segments deeply transversely depressed, only very feebly punctate. Legs dark, the the tarsi pale, the front tibiæ also pale, and the other tibiæ more dilute in colour at the base and apex.

This insect has very much the facies of the species of *Silusa*; but the middle coxæ are very widely separated, and the mesosternal process is extremely short and broad with quite broad straight extremity; so I have placed it in *Diestota*. I have seen three individuals; one of them is a male, and has the hind margin of the seventh dorsal plate finely crenulate, and at each side provided with a very slender spine.

14. **Diestota convexa.**

Convexiuscula, nigra, antennarum basi pedibusque rufis; prothorace valde transverso, convexo, angulis posterioribus rectis, basi in medio impressa; abdomine irregulariter punctato, segmentis secundo et tertio ad basin profunde transversim depressis.

Long. 3 millim.

Hab. GUATEMALA, Teleman (*Champion*); PANAMA, Bugaba 800 to 1500 feet (*Champion*).

Antennæ short and stout, much thickened outwardly; third joint about equal to the second; fourth about as long as broad; from the fifth to tenth, each is broader than its predecessor, the fifth evidently, the tenth strongly transverse; terminal joint thick, elongate, longer than the two preceding together. Head narrow, only about half as broad as the elytra, obsoletely punctate. Thorax very short and broad, a little narrowed towards the front; the base in the middle somewhat lobed, and deeply transversely impressed; the hind angles distinct and rectangular, the surface extremely finely punctate. Elytra longer than the thorax, coarsely and closely punctate. Hind body convex beneath, the second and third segments each very deeply transversely impressed at the base, and with crenulations in the depression, elsewhere sparingly and rather finely punctate, but with a distinct pubescence.

This is a peculiar species, readily recognized by the depressions on the hind body and by the form of the thorax. Only two specimens have been found. In the male the sixth dorsal plate has a longitudinal carina on the middle; the hind margin of the seventh segment is closely crenulate, and has a very short tooth on each side.

GYROPHÆNA.

Gyrophæna, Mannerheim, Brachél. p. 74 (1830); Mulsant et Rey, Hist. Nat. Col. Fr., Brévipennes, Aléochariens, Bolitoch. (1871), p. 17.

About sixty species are included in this genus; they are distributed over Europe, Ceylon, Austro-Malasia, Japan, and North and South America, so that it is probable the genus will prove to be nearly cosmopolitan. All the species whose habits are known are in the perfect state exclusively dwellers in or among fungi; and at present, if we may judge from the number of Central and South American species, it would appear that the forests of tropical America are the headquarters of the genus. The species are best distinguished by the sexual armature of the terminal segments; and the study of the large series here described has disclosed the remarkable fact that in many species this armature is as peculiar, or nearly so, in the female as it is in the male sex: in certain cases where the male armature is very similar in the males of two species, it is very dissimilar in the females; in the European species the females are without external armature; in one of the species here described the male characters are subject to diminution or disappearance; so that we have in fact among these minute creatures all the complex peculiarities of sexual armature that exist among the large Lamellicorn Coleoptera, but in the latter on the anterior parts of the body.

1. Gyrophæna pumila.

Gyrophæna pumila, Sharp, Trans. Ent. Soc. Lond. 1876, p. 72[1].

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).—SOUTH AMERICA, Amazon valley [1].

Mr. Champion has sent us but a single specimen of this most minute creature. It differs from the Amazonian individuals in that the antennæ are clear pale yellow, but in no other respect so far as I can see.

2. Gyrophæna oblita.

Minuta, brevis, latiuscula, subdepressa, sublævigata, nitida, fusco-nigra, antennis pedibusque dilute flavis; prothorace fortiter transverso, fere impunctato; elytris quam hic paulo longioribus, parcius subtiliusque punctulatis.

Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ clear yellow, rather short and stout; third and fourth joints very small, fifth to tenth transverse; terminal joint short. Head short and broad, narrowed behind the eyes, impunctate. Thorax twice as broad as long, narrower than the elytra, almost impunctate, without trace of serially or quadrately disposed punctures. Elytra with fine and distant punctuation. Hind body impunctate.

This tiny insect is of broader form than *G. pumila*, and has the elytra visibly punctate. I do not see any sexual characters among the sixteen individuals found by Mr. Champion.

3. Gyrophæna varians.

Minuta, angustula, picea, antennis pedibusque flavis, illis haud crassis, apicem versus leviter incrassatis, articulis penultimis leviter transversis; capite angustulo; prothorace parvo, convexo, glabro; elytris brevibus, in utroque sexu granulatis, sed maris interdum fere lævigatis.
Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ clear yellow, slightly thickened from the fifth joint to the apex; third joint short and slender, half as long as the second; fourth minute but distinct. Head narrow. Thorax without impressed punctures. Elytra but little longer than the thorax.

Ten specimens of this minute creature have been discovered by Mr. Champion. Its sexual characters are of an extraordinary nature. Seven of the individuals are females and have the elytra furnished with rather coarse raised granules, and two fine short convergent raised lines on the dorsal plate of the sixth segment; the dorsal plate of the seventh segment is triangular in the middle and has on each side an elongate remarkably slender spine, placed very near to the side of the triangle and projecting as far back as it. The three males differ greatly in the amount of development of their sexual peculiarities: in the individual where they are greatly developed there are four larger, irregular tuberculiform elevations near the suture of the wing-cases; the fifth dorsal plate of the hind body bears two elongate, subapproximate, acuminate, depressed spines, which project backwards over the following segment; the dorsal plate of the seventh segment forms in the middle an elongate nearly parallel-sided lobe, the extremity of which is emarginate; in another individual of this sex the elytra are nearly smooth, and there is no trace of the spines of the fifth segment,—the third individual being intermediate between the other two.

4. Gyrophæna fuscipes.

Parum convexa, nigra, antennis fusco-testaceis, pedibus fuscis; antennis articulis 5°–10^{m} transversis; prothorace fortiter convexo, glabro; elytris (in utroque sexu?) subtiliter granulatis.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ of a sordid testaceous colour, not stout; third joint small, shorter than the second; fourth very indistinct; fifth to tenth transverse; terminal joint short. Thorax small, glabrous, without impressed punctures, the sides very depressed. Elytra longer than the thorax, with raised minute granules rather evenly distributed over the surface. Legs dark; the tarsi, however, nearly yellow.

Of this minute species there are only two badly preserved individuals, and the sexual characters are very obscure; but independent of these the species will be readily recognized by the dark legs and the impunctate thorax. The male has two fine granules on the middle of the dorsal plate of the sixth segment in front of the hind margin; the following segment is unusually small, and, though I have dissected it off, I am unable to see exactly its structure; so that any peculiarity it possesses must be very minute: as I have found the œdeagus, there is no doubt that this is really the male. In the other individual I can scarcely detect the minute granules, so suppose that it may be the female.

5. **Gyrophæna sordidula.**

Subdepressa, parcius punctata, nitida, fuscescens, antennarum basi pedibusque dilute testaceis, elytrorum humeris abdominisque apice vage testaceis; antennis brevibus, articulis 5°–10^{m} transversis; prothorace fortiter transverso, obsolete punctato, elytris quam hic longioribus, parce obsoleteque punctatis.

Long. 2 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ rather short; third joint short; fourth very small and obscure; fifth to tenth strongly transverse; terminal joint short. Head short and broad, narrowed behind the eyes. Thorax very strongly transverse, about twice as broad as long, a little narrower than the elytra, with four very indistinct punctures quadrately placed on the disk. Elytra longer than the thorax, of a sordid or smoky colour, with the shoulders yellowish, sparingly punctate, the punctures indistinct.

In the male the hind margin of the dorsal plate of the seventh ventral segment bears two very minute teeth distant from one another—so small that they cannot be observed without dissecting off the plate,—and on each, outside, a rather longer slender spine.

I have contented myself with describing the male of this species, because certain individuals of the other sex may be either its female or that of a very closely allied species, as they have the thorax rather less transverse and the antennæ quite yellow. It is the more doubtful whether these specimens are really the females of *G. sordidula*, because I have sufficient evidence that there occur in the same locality two other species very closely allied to *G. sordidula*. This evidence consists of two fragmentary males, having lost their antennæ, extremely similar to *G. sordidula*, but with very different male characters; they are not in a condition for description, but make it clear that there are several excessively similar obscure species to be detected in the same locality. In addition there are fragments of a female from the Volcan de Chiriqui which probably pertain to another closely allied species.

6. **Gyrophæna similis.**

Subdepressa, parce punctata, nitidula, fuscescens, antennarum basi pedibusque sordide testaceis; elytris sordide

testaceis ad angulos externos fuscis ibidemque magis punctatis; antennis articulis 5°–10ᵐ subquadratis; prothorace disco parum discrete quadripunctato.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, Zapote (*Champion*).

Antennæ moderately long; third joint short; fourth small; fifth and following each about as long as broad; terminal joint rather elongate. Head rather short and broad; eyes moderate. Thorax strongly transverse, base much rounded; the surface with a few indistinct punctures, of which four on the disk (apparently the remnants of very obliterated series) are the most evident. Elytra longer than the thorax, with numerous punctures about the hinder angles, and a few irregularly placed near the suture. Hind body impunctate.

Although very similar to *G. sordidula* and to *G. apicicornis*, and in respect of its antennæ intermediate between the two, this insect has very different male characters. In this sex on the sixth dorsal plate of the hind body there is an elongate tuberculiform elevation before the hind margin; the hind margin of the following segment terminates on each side in a very elongate spine, and between these spines is much produced, so that its middle part forms an elongate subtriangular process whose apex is a little rounded.

Only a single male individual has been found in each of the two localities.

7. Gyrophæna apicicornis.

Subdepressa, parce punctata, nitida, fuscescens, antennarum basi pedibusque testaceis, abdomine elytrorumque basi minus læte testaceis; antennis articulis 5°–10ᵐ subquadratis, articulo ultimo elongato; prothorace quam elytra multo angustiore, parce obsoleteque punctato.
Long. $2\frac{1}{2}$ millim.

Hab. Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ moderately long; third joint very slender, fourth slender; longer than broad; the following each about as long as broad; terminal joint remarkably elongate, rather longer than the two preceding together, paler in colour towards its extremity. Head broad, narrowed behind the eyes. Thorax much narrower than the elytra and not very strongly transverse, a little narrower behind, with only a few very indefinite punctures. Elytra longer than the thorax, very indistinctly punctate.

In the male there is a very minute granule just in front of the hind margin of the sixth dorsal plate of the hind body; the hind margin of the following segment is rounded, but from its middle there project two rather elongate incurved teeth, and in the middle the hind margin is minutely tuberculate.

A series of sixteen specimens has been secured of this species; the unusual elongation of the terminal joint of the antennæ makes it easily recognized.

8. **Gyrophæna flavipes.**

Nigra, elytris nigro-fuscis, antennis fusco-testaceis, basi pedibusque testaceis, nitidissima, fere impunctata; antennis articulis 5°–10^{m} transversim quadratis; prothorace fortiter transverso.
Long. $1\frac{5}{8}$ millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ rather short and stout; terminal joint but little longer than the tenth. Thorax very strongly transverse, about twice as broad as long, almost without punctuation, but with two very minute punctures some distance in front of the base. Elytra very shining, not quite so black as the thorax, the shoulders scarcely paler; finely and extremely sparingly punctate.

In the male there are some granules on the sutural portion of the elytra, and the third and fourth joints of the antennæ are excessively short; the dorsal plate of the seventh segment of the hind body has on each side a fine incurved spine, and, between these, is angularly prominent in a tuberculiform manner. The female has the third joint of the antennæ not quite so short.

Only a single pair is before me; and I have not succeeded in getting a very definite sight of the male structural characters.

9. **Gyrophæna granulata.**

Subconvexa, nitidula, picea, abdomine rufo, elytris sordide testaceis extrorsum late fuscis, antennarum basi pedibusque testaceis; antennarum articulis 3° 4°que brevibus, 5°–10^{m} leviter transversis; elytris crebre subæqualiter granulatis.
Long. 2 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ rather short and stout; the first four joints yellow, the rest infuscate; terminal joint short; head without punctuation. Thorax very strongly transverse, on the disk with four small punctures placed quadrately, the anterior pair very minute. Elytra rather longer than the thorax, bearing numerous fine granules over the whole surface. Hind body convex, red, with the fifth segment darker, not very shining, but only very obscurely punctate and pubescent.

In the male the granules on the elytra are rougher than in the female, and the dorsal plate of the seventh segment of the hind body terminates on each side in an elongate rather slender spine, and between these spines forms a prominent angle, which, however, does not project so far back as the apex of the lateral spines. The female has in the middle of the hind margin of the corresponding plate two minute slender acuminate teeth, and on each side a rather longer, slender, curved spine.

Five specimens of this species, only one of them a female, have been found. It is allied to the Amazonian *G. sparsa*.

10. **Gyrophæna brevidens.**

Vix depressa, nitidula, fusca, antennis pedibus elytrisque testaceis, his ad angulos externos infuscatis; antennis

subgracilibus, articulis penultimis leviter transversis; prothorace transverso elytris multo angustiore, disco parum discrete quadripunctato.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ rather slender, moderately long; third joint small, much shorter than second; fourth small, as long as broad; fifth rather longer than broad; tenth slightly broader than long; terminal joint moderately long. Thorax much narrower than the elytra, the discoidal punctures not large, with a few other very indefinite punctures. Elytra in the female nearly without punctuation, in the male with rather numerous granules which are distinct at the suture but become obsolete at the sides and anterior angles. The hind body is deeply infuscate yellow.

In the male there are two fine, distant, longitudinal raised lines on the dorsal plate of the sixth segment of the hind body; the armature at the hind margin of the seventh plate is remarkably short, and consists of an angular prominence in the middle, just in front of which there is an obscure transverse tuberculation, and on each side there is a very short, easily overlooked, prominent angle. The female is without peculiar structure.

Five individuals, very badly preserved, have been found of this species.

11. Gyrophæna discoidalis.

Sat convexa, picea, nitida, antennarum basi pedibusque testaceis; prothorace convexo, disco quadripunctato; elytrorum disco lævigato, lateribus crebre obsolete punctatis; abdomine apicem versus attenuato.
Long. 3 millim.

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*).

This is apparently a very distinct species, though represented only by a single decayed and mutilated individual. The four basal joints of the antennæ are yellow; the third small, only half as long as the second; fourth quite small; fifth to seventh dark, each about as long as broad; the rest wanting. Head rather small. Thorax a good deal narrower than the elytra, transversely convex, the disk with four large quadrately placed punctures. Elytra longer than the thorax, dark, with yellow shoulders; near the suture with a broad smooth space, but punctate at the sides; the punctuation being most extensive and distinct at the outer angles behind. Legs clear yellow.

The unique individual is a male, and has a large elongate tubercle on the middle of the sixth dorsal plate of the hind body, some distance in front of the hind margin; the corresponding plate of the following segment is narrowed behind, and has on each side a very elongate slightly curved spine, and between these is produced so as to form in the middle an elongate subangular projection, which is incrassate and does not extend quite so far backwards as the lateral spines.

12. Gyrophæna pollens.

Convexa, nitidula, haud pubescens, nigra, antennarum basi pedibusque testaceis, his femoribus fuscescentibus; antennis articulo quarto brevissimo, 7°–10ᵐ leviter transversis; prothorace quadripunctato; abdomine interdum (præsertim in femina) picescente.

Long. $3\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ with the four basal joints yellow, the others black; third joint shorter than second; fourth very short; joints fifth to tenth similar to one another in breadth, the first of them about as long as broad, the last of them a little transverse. Thorax very polished and shining, convex transversely, with four conspicuous punctures placed so as to form a square on the middle. Elytra rather longer than the thorax, in the male with numerous rough granules, in the female with a few distant punctures.

In the male the dorsal plate of the seventh segment terminates on each side in an elongate scarcely acuminate spine; the two spines are parallel, except that they are slightly incurved at the extremity; between them the plate is produced so as to form an elongate lobe, which is polished and shining, convex transversely, with rounded extremity, which does not reach quite so far back as the lateral spines do. In the female the corresponding plate terminates in four straight teeth, the two in the middle shorter and finer than the lateral ones.

Mr. Champion has found a large series of this species. It exhibits but little variation except in the colour of the hind body, which sometimes, perhaps owing to immaturity, is picescent.

13. Gyrophæna humeralis.

Convexa, nitidula, haud pubescens, nigricans, antennis fulvis, basi pedibusque testaceis; antennis articulo quarto parvo, penultimis vix transversis; prothorace quadripunctato; abdomine picescente vel rufescente; elytrorum humeris flavescentibus.

Long. 3 millim.

Hab. Panama, Volcan de Chiriqui 3000 to 4000 feet, Bugaba (*Champion*).

This species is closely allied to *G. pollens*, but has some constant differences in colour, in the structure of the antennæ, and in the characters of each of the sexes. It also agrees in numerous respects with Erichson's description of *G. splendidula*, but in other points does not accord therewith. I think indeed there is little doubt, from the localities and measurements given by Erichson, that his description was taken from more than one species.

Antennæ rather slender; third joint much more slender than second, almost as long as it; fourth joint small, nearly as long as broad; fifth joint not, tenth hardly transverse. Thorax very shining, convex transversely, with four very large punctures on the middle. Elytra rather longer than the thorax, very shining, with distinct pale

humeral spot; with a few granules, especially near the suture, in the male, and a very few punctures in the female.

The dorsal plate of the seventh segment is formed much as in *G. pollens*, except that the projections are rather longer, and the central lobe is flatter and more truncate at the extremity and reaches as far back as the lateral teeth. In the female the corresponding part is quadridentate, as in *G. pollens*, but the teeth are longer, the lateral ones more convergent, and the middle pair reach nearly as far back as those at the sides.

Like *G. pollens*, the specimens show variation in the colour of the hind body; but in none of them is it black.

14. **Gyrophæna miranda.**

Convexa, nitidula, haud pubescens, picea, antennis fulvis, basi, pedibus, elytrorumque humeris testaceis; antennis articulo quarto parvo, 4°–10^{m} haud transversis; prothorace quadripunctato; abdomine picescente vel rufo.

Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Toxpam and Cordova (*Sallé*); GUATEMALA, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, David (*Champion*).

This insect is extremely similar to *G. humeralis*, and, in fact, differs only by the sexual characters. These in the male are very similar to those of *G. humeralis*; but the tubercles on the elytra are rougher, and the middle lobe of the seventh dorsal plate is broader and is more distinctly (but still only slightly) emarginate behind. The females of the two species are, on the contrary, very distinct: in *G. miranda* the elytra are tuberculate, though less coarsely than in the male, and the middle of the seventh dorsal plate forms a large triangular projection, the apex of which is divided by a short and narrow fissure; on each side there is an elongate spine directed much inwards, so that it runs nearly parallel with the side of the triangular projection, and has the same length.

The Amazonian *G. convexa* was described by me from a single individual, supposed on account of its remarkable sexual peculiarities to be a male; but the discovery of the two sexes of *G. miranda* indicates that the Amazonian individual is a female. It is indeed excessively closely allied to *G. miranda*, but shows some slight differences in the sexual characters, the chief of which are that in each sex it possesses a kind of canaliculation along the middle of the seventh dorsal plate, and that the notch dividing the apex of the middle lobe of the female is about twice as long as it is in *G. miranda*.

Of *G. miranda* I have seen two Mexican specimens, which differ very slightly from the typical or Central-American form, fourteen specimens from Zapote, one from Panama, and three from Nicaragua. Of these latter two are entirely ferruginous in colour, but do not differ in other respects.

15. **Gyrophæna chontalensis.**

Convexa, nitidula, glabra, ferruginea vel picea, antennarum basi pedibusque testaceis; antennis articulo tertio brevi, 6°–10ᵐ leviter transversis; prothorace quadripunctato; elytris nitidissimis, parcissime punctulatis.

Long. $2\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ with the third joint quite short, much shorter than the second, which is not elongate; fourth quite small. Thorax very shining, transversely convex; disk with four distinct quadrately placed punctures. Elytra with a few distant punctures.

This insect is extremely similar to the ferruginous variety of *G. miranda*, but has quite different sexual characters. The elytra are destitute of granulation in each sex. In the male the dorsal plate of the seventh segment of the hind body projects a little in the middle, so as to form a very short obtuse prominence with truncate extremity, and on each side there is a rather small slender spine. In the female the same plate has two small closely approximate acuminate teeth in the middle, and on each side a rather larger slightly curved spine extending scarcely further back than the middle teeth.

I have seen four individuals in very bad condition of this species; a fifth specimen, in fragments, is nearly black, but, as it presents apparently some other slight distinctions, may be a different species.

16. **Gyrophæna convexicollis.**

Convexa, nitidula, glabra, nigra, elytris abdomineque piceis, antennis pedibusque testaceis, illis articulo tertio brevi, 5°–10ᵐ subquadratis; prothorace convexo, disco quadripunctato; elytris maris parce granulatis.

Long. 2 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ with the third joint very short, only about half as long as the not elongate second joint, and indistinctly separated from the very minute fourth joint; the following joints each almost as long as broad; terminal joint short. Head broad and short. Thorax strongly transverse, very shining, the front angles much depressed, the disk with four rather fine quadrately placed punctures. Elytra not so black as the thorax, very shining, with some rather coarse tubercles along the suture (in the male), a few towards the shoulders, and some finer ones about the hind margin.

In the male there are six or seven minute fine tubercles across the dorsal plate of the sixth segment of the hind body in front of the hind margin. The following plate is produced in the middle so as to form a rather elongate nearly triangular lobe, and has on each side an elongate spine extending further back than the central lobe.

Only one specimen has been found. Although very closely allied to the Amazonian *G. sparsa*, it is, I have no doubt, distinct.

17. **Gyrophæna jansoni.**

Sat convexa, nitidula, glabra, nigra, elytris abdomineque picescentibus, antennis pallide fuscis, basi pedibusque testaceis, illis articulo tertio brevi, 5°–10^{m} transversis; prothorace convexo, disco quadripunctato; elytris maris parce granulatis.

Long. 2 millim.

Hab. NICARAGUA, Chontales (*Janson*).

This insect is extremely similar to *G. convexicollis*; but the antennæ have joints fifth to tenth shorter, broader, and darker in colour, and the male abdominal characters are different: in this sex there are apparently no tubercles on the sixth segment; and the central lobe on the following segment, instead of being triangular, is quadrate (that is, it has parallel sides and a truncate extremity); and between it and the lateral teeth there are on each side two excessively minute serrations.

Only a single badly preserved individual has been found. Three individuals of the other sex, from Zapote, though extremely similar to *G. jansoni*, are probably a distinct species: they have no granulations on the elytra.

18. **Gyrophæna crassiventris.**

Convexa, nitidula, nigricans, elytris fulvis, antennarum basi pedibusque testaceis, abdomine rufescente, apicem versus attenuato, subtus perconvexo; prothorace quadripunctato; elytris in utroque sexu granulatis.

Long. 2 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ with the four basal joints yellow, the others dark; the third joint very short, only about half as long as the second; fourth very short; the fifth joint not, the tenth slightly, transverse; terminal joint short. Prothorax transverse, but not quite so strongly as in some species, transversely convex; on the middle there are four quadrately-placed impressions. Elytra longer than the thorax, covered with numerous granules, which are coarser in the male than in the other sex. Hind body red above, with a darker fascia or spot behind the middle, more than usually convex beneath, and conspicuously narrowed behind.

In the male there are six excessively minute linear granules on the sixth dorsal plate in front of the hind margin; the dorsal plate of the following segment forms a large triangle in the middle, and has on each side a long spine extending a good deal further back than the middle triangle. In the female the corresponding plate has two small teeth in the middle and a rather longer spine on each side.

Of this distinct little species Mr. Champion has found three specimens. Janson also found at Chontales a single male which may be a small variety of this species, but may possibly prove distinct; the chief differences are that it is rather smaller, has the granules on the elytra less developed, and the triangle and teeth of the apical segment smaller.

19. **Gyrophæna gracilicornis.** (Tab. VI. fig. 13.)

Subdepressa, testacea, nitida, capite, elytris (his basi excepta) abdominisque cingulo nigricantibus; antennis elongatis, articulis tertio quartoque elongatis; elytris parce punctatis; oculis magnis.
Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Senahu (*Champion*); Panama, David (*Champion*).

Antennæ slender and elongate; the third and fourth joints slender, even the tenth longer than broad; terminal joint rather elongate. Thorax very strongly transverse, with four very minute punctures on the middle. Elytra in greater part black.

The male characters are very remarkable: there is a strongly elevated plica at the outer margin of each wing-case a little before the extremity, and a second, oblique, less elevated plica near the suture behind; the lateral margins of the hind body are incrassate, and that of the second segment bears an elongate, elevated, acute free angle or spine; the sixth dorsal plate has the basal portion broadly depressed in the middle; and the hind margin of the seventh plate is narrowed towards the extremity and has a very short tooth on each side, between which it projects as a short broad angular prominence reaching about as far back as the lateral teeth. The female has a short broad tooth on each side of the hind margin of the seventh dorsal plate.

The three individuals from Panama from which I have taken this description are badly preserved. The unique female from Senahu is figured, and has the antennæ slightly less elongate than has the only individual from Panama that has not lost these organs.

This and the two following species belong to a group characteristic of the New World, and remarkable by the large, convex, coarsely-facetted eyes. The group appears well entitled to generic distinction.

20. **Gyrophæna sallæi.**

Subdepressa, testacea, nitida, capite, elytrorum apice abdominisque cingulo nigricantibus; antennis sat elongatis, articulis tertio quartoque mediocribus; elytris parce punctatis; oculis magnis.
Long. 3 millim.

Hab. Mexico, Vera Cruz (*Sallé*).

This species, so far as I can judge from a single pair in bad condition, is extremely closely allied to *G. gracilicornis*, but has the antennæ less elongate, the sexual characters of the male a little different, and the black colour on the wing-cases indefinite and covering only the outer apical angle.

In the male the wing-cases bear two elevated folds similar to those of *G. gracilicornis*, and the punctuation assumes the form of obsolete granules; the lateral margins of the hind body are much incrassate, but there is no detached process on the second segment; the dorsal plate of the sixth segment is broadly depressed along the middle; and the apical teeth of the following segment are even shorter and more obtuse and approxi-

mate than they are in *G. gracilicornis*. The female has a very short tooth at each side of the hind margin of the apical dorsal plate.

One of M. Sallé's specimens bears a label indicating that it was found in mushrooms, in September 1854. A very badly preserved individual found by Blancaneaux at Belize may possibly be a small specimen of *G. sallæi*.

21. **Gyrophæna occulta.**

Latiuscula, lævigata, nitida, testacea, capite abdominisque cingulo fuscis; antennis brevibus, apicem versus leviter incrassatis, articulo tertio brevi; oculis magnis.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, San Isidro 1600 feet (*Champion*).

Antennæ clear yellow; third joint short and slender; fourth joint small; fifth to tenth each rather strongly transverse. Thorax smooth and shining, with four extremely minute punctures on the middle. Elytra almost impunctate.

This species is readily distinguished from the others with large eyes by its short antennæ. The external male characters are slight, the seventh ventral segment having a small piece cut out of the extremity.

A series of eighteen specimens found at San Isidro by Mr. Champion shows very little variation; and there are also single females from Vera Cruz in Mexico, Belize in British Honduras, and David in Panama, presenting minute differences, which a knowledge of the males would probably show to be different species.

BRACHIDA.

Brachida, Mulsant et Rey, Hist. Nat. Col. Fr., Brévipennes, Aléochariens, Bolitoch. p. 4 (1871).

This genus may perhaps prove to be of considerable extent; for although only recently established for a single European species, three others from Australia and two from South America have been added to it. At present it is not known to occur in North America.

1. **Brachida modesta.**

Ferruginea, antennis pedibusque testaceis, illis in medio nigricantibus, pube brevissima sat dense vestita; prothorace fortiter transverso, basi rotundata in medio subemarginata; elytris dense subtilissime punctulatis.

Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz, Senahu, Cubilguitz, and La Tinta (*Champion*); PANAMA, Bugaba (*Champion*).

Antennæ rather short, slender at the base, distinctly thickened outwardly, the four or five basal joints pale yellow, the following nearly black; terminal joint again yellow; third joint slender, much shorter than the second; fourth slender and rather elongate; fifth quite as long as broad, tenth hardly so long as broad; terminal joint short. Head

broad, but only half as wide as the elytra. Thorax quite twice as broad as long, transversely convex in front, the front angles extremely depressed; the surface finely pubescent, but scarcely punctulate. Elytra longer than the thorax, very finely punctulate, with short very fine pubescence. Hind body broad, acuminate behind, very indistinctly and hardly densely punctulate; the lateral margins of the anterior segments broad.

Eleven individuals of this species have been found; but they do not exhibit any external sexual character, so far as I can see: nearly all are in bad condition. Two individuals found on the Volcan de Chiriqui, at a height of between 2500 and 4000 feet, apparently only differ by the antennæ being quite concolorous. Whether they will prove to be a distinct species or not I am very doubtful.

2. **Brachida sparsa.**

Ferruginea, antennis pedibusque testaceis, illis in medio nigricantibus, pube brevissima vestita; prothorace fortiter transverso, basi rotundata in medio subemarginata; elytris crebre subtilissime, abdomine parce punctatis.

Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

This insect is quite similar to *B. modesta*, except that it differs in the punctuation of the elytra and hind body, which is comparatively sparing and not quite so invisible, and the pubescence is consequently less dense.

Two individuals have been found.

3. **Brachida carinata.**

Ferruginea, capite abdominisque basi in medio picescentibus, antennis pedibusque testaceis, illis in medio nigricantibus, pube brevissima vestita, omnium subtilissime, haud perspicue punctulata; mesosterno longitudinaliter carinato.

Long. $2\frac{7}{8}$ millim.

Hab. GUATEMALA, Dueñas (*Champion*).

Antennæ similar to those of *B. modesta*, scarcely so elongate. Head small in comparison with the other parts. Thorax considerably narrower than the elytra; these latter with a very fine, abundant, upright pubescence, which is very easily removed and then leaves the surface smooth and shining. Hind body broad, only sparingly punctate.

Though very similar to *B. modesta* and *B. sparsa*, this insect will be readily distinguished by the smaller head and thorax and the carinate mesosternum. Only a single individual has been found.

4. **Brachida geniculata.**

Ferruginea, antennis articulo basali elongato, in medio piceis, apice ——?; elytris dense subtilissime granulatis; abdomine subtiliter punctulato, lateribus argute elevatis, acutis; mesosterno medio fortiter carinato.

Long. circiter 2 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ with elongate and slender basal joint; second joint slender, but broader and much longer than the slender third joint; fourth joint small; fifth to seventh each rather longer than broad, darker in colour than those preceding, the remainder broken off. Head only half as broad as the elytra. Thorax very transverse, transversely convex; base rounded and emarginate in the middle. Elytra longer than the thorax, covered with extremely fine granules. Lateral margins of hind body much elevated, and forming a sharp edge.

Although the specimens are in such a decayed condition that only a superficial examination of them is possible, yet it is evident this is a very distinct species, but is connected with the ordinary forms of the genus by means of *B. carinata*. The antennæ bend backwards at the slender extremity of the more than usually elongate basal joint, and thus assume a geniculate appearance. I do not detect any sexual distinctions.

BRACHYCHARA.

Corpus crassum, convexum, prothorace amplo, convexo, lateribus abruptissime inflexis. Prosternum brevissimum. Coxæ intermediæ sat distantes; metasternum inter eas sat longe productum, cum mesosterno processu lato conjunctum. Metasternum breve; coxæ posteriores magnæ. Tarsi posteriores articulo basali elongato, ultimi fere æquali.

A peculiar form, indicating in several respects an approach to the Tachyporini. The head is capable of great inflection; and the segments of the hind body are extremely retractile. The head is short and broad, the parts of the mouth small, and apparently without much peculiarity. The thorax is very convex transversely, and the ample sides are so abruptly inflexed that, viewed from beneath, they present a quite sharp edge; the prosternum is extremely short. The mesosternum is oblique in direction; and the middle coxæ are rather widely separated; the metasternum is much produced between them, so that its process is as long as that of the mesosternum; and its margin is rounded in front and received in, or on, the mesosternal process, to which it is so accurately adapted that the outline of the two is indistinct; the suture between them, viewed in a certain light, appears however somewhat thickened. The middle tarsi are rather short, four-jointed, the terminal joint as long as the three basal together. The five-jointed hind tarsi have the basal and apical joints elongate and subequal.

At present the genus is, I think, best located near *Brachida*, to which, however, it is by no means closely allied.

1. **Brachychara crassa.** (Tab. VI. fig. 14.)

Convexa, ferruginea vel picea, pedibus antennarumque basi et apice testaceis, his medio nigris, subnitidis,

parcius minus tenuiter pubescens; elytris sparsim punctatis, punctis quasi transversim aciculatis; prothorace transverso, convexo, basi in medio breviter lateque sublobata, angulis anterioribus obtusis.
Long. $2\frac{1}{4}$–$3\frac{1}{4}$ millim.

Hab. GUATEMALA, San Gerónimo, Zapote, Balheu and San Juan in Vera Paz (*Champion*).

Antennæ rather short, distinctly thickened outwardly, black in the middle, yellow or nearly so at the base; the apical joint again yellow; basal joint rather short and stout, scarcely longer than the second; third joint more slender than and only about half as long as the second; fourth rather small, as long as broad; fifth as long as broad; tenth decidedly transverse; terminal joint rather large, obtuse. Thorax almost impunctate, with a scanty but conspicuous, rather rigid pubescence. Elytra in the middle hardly so long as the middle of the thorax, with a scanty peculiar sculpture consisting of short transverse very obscure fine raised lines. Hind body quite sparingly punctate, at the base impunctate. Legs yellow.

In the male the dorsal plate of the seventh segment of the hind body is narrowed towards the extremity and terminates on each side in an elongate spine, and between these is produced so as to form a small nearly acuminate lobe. In the female the surface of this plate is obscurely granulate, the lateral teeth are smaller, and the central lobe is absent or replaced by a very obscure more or less emarginate projection.

Eighteen individuals have been found; they vary a good deal in size and colour, and even in the accentuation of the peculiar sculpture of the elytra.

2. **Brachychara brevicornis.**

Ferruginea, antennis fuscis articulo ultimo pedibusque testaceis, his tibiis fuscescentibus, nitida, parcissime punctata et pubescens; prothorace convexo, brevi, angulis anterioribus rectis.
Long. 2 millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ short, much thickened externally; third joint short, fourth very small, fifth to tenth each rather strongly transverse. Thorax very short and broad, very convex transversely, the base simply rounded, the anterior angles distinct; surface without sculpture and with a very scanty pubescence. Elytra in the middle not longer than the thorax, very sparingly and obsoletely punctate. Hind body with some punctures on the fifth and sixth segments.

The only individual found is probably a female, the seventh ventral segment being armed only with two quite minute rather distant teeth in the middle of its hind margin. Although similar to the small individuals of *B. crassa* in appearance, the species is a very distinct one.

PLACUSA.

Placusa, Erichson, Käf. Mark Brand. i. p. 370.

This genus comprises about twenty species, most of which are European; but one or two are known from Ceylon and Australia, and it is probable the genus has a wide distribution, although no species has yet been recorded from North America. The individuals are small obscure creatures, living under the bark of logs and dead trees.

1. Placusa confinis.

Placusa confinis, Sharp, Tr. Ent. Soc. Lond. 1876, p. 44 [1].

Hab. Panama, Bugaba (*Champion*).—South America, valley of the Amazon [1].

The few individuals found by Mr. Champion are apparently all females, so that their identification is not quite certain.

2. Placusa minuta.

Depressa, nigro-fusca, pedibus testaceis, crebre, subtiliter, æqualiter punctulata; antennis brevibus, haud crassis; capite quam thorax parum angustiore, hoc transverso, lateribus vix curvatis, antrorsum haud angustato; abdomine parallelo.

Long. 1½ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ blackish, with the basal joint fuscous-yellow; third joint small, shorter than the second; fourth minute but transverse; fifth and following joints rather strongly transverse; terminal joint rather small, scarcely so long as the two preceding together. Head rather closely punctate. Thorax a little narrower than the elytra, transverse but not strongly so, the sides very little rounded and but little narrowed in front, closely and finely punctate. Elytra distinctly longer than the thorax, similarly punctate, as is also the hind body. Legs yellow.

In the male the hind margin of the seventh dorsal plate is armed with three rather long widely separated equidistant teeth, one in the middle and one near each side margin; at the base of the middle tooth there are two very small tubercular elevations.

This very minute insect is extremely similar to *P. confinis*; but the male characters are very different, and besides this the head is a little longer, and the thorax broader in front, the head, thorax, and elytra are more closely punctate, and the elytra not at all flavescent. Only three specimens of *P. minuta* have been found: the basal segments of the hind body are more or less reddish, probably according to the immaturity of the example.

3. Placusa crassidens.

Sat depressa, nigra, elytris vix dilutioribus, pedibus testaceis, femoribus fuscis; antennis brevioribus, crassiusculis; prothorace haud fortiter transverso, antrorsum haud angustato, parce punctato, sat nitido.

Long. 2–2⅛ millim.

Hab. GUATEMALA, Balheu and San Joaquin in Vera Paz, Carrizal, San Gerónimo (*Champion*).

Antennæ black, very obscurely paler at the base; third joint short, shorter than the second; fourth smaller than the others; fifth and following joints strongly transverse; terminal joint short, quite rounded at the extremity. Head a good deal narrower than the thorax, not closely punctured, rather shining. Thorax transverse, scarcely so broad as the elytra; the sides nearly straight; the surface rather sparingly punctured and distinctly pubescent, but yet shining. Elytra longer than the thorax, not densely punctate, slightly shining. Hind body not very depressed, subparallel, not densely punctate.

In the male the hind margin of the dorsal plate of the seventh segment of the hind body is armed with three rather short, very thick, rather approximate, equidistant teeth, the outer one of these on each side being slightly curved; the preceding plate bears on the middle two rather distant, minute, and short linear carinæ.

Eight specimens have been found of this species.

4. **Placusa simplex.**

Sat depressa, posterius acuminata, crebre punctata evidenterque pubescens, nigra, antennarum basi pedibusque testaceis, elytris nigro-fuscis, abdominis apice fusco-testaceo; antennis haud elongatis, subgracilibus; prothorace sat fortiter transverso, antrorsum leviter angustato.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Quiche Mountains, at an elevation of between 7000 and 9000 feet (*Champion*).

Antennæ rather slender, not elongate, conspicuously setose; third joint slender, shorter than the second; fourth slender, longer than broad, fifth also longer than broad, tenth about as long as broad; terminal joint rather stout, not elongate. Head much narrower than the elytra. Thorax rather convex, rather closely punctate, rounded at the sides and a little narrowed in front. Elytra longer than the thorax, closely punctate. Hind body closely punctate.

The male characters are but slight: there is a very fine minute tooth on each side of the hind margin of the dorsal plate of the seventh segment of the hind body; and between these teeth there are some excessively minute serrations, so small, indeed, that they can only be detected by isolating the plate. Four individuals have been found. The colour of the elytra and apex of the hind body varies a little according to the maturity of the specimen.

5. **Placusa obliquata.**

Subdepressa, posterius acuminata, haud dense punctata, sat nitida, nigra, antennarum basi pedibusque testaceis, elytris quam prothorax vix longioribus, oblique testaceo-signatis; antennis brevibus, subgracilibus, articulis 4°–10^{m} leviter transversis.

Long. 2 millim.

Hab. GUATEMALA, Balheu (*Champion*); PANAMA, Bugaba (*Champion*).

Antennæ short and not stout; third joint short, fourth and following joints short but not strongly transverse; terminal joint short, stout, rounded at extremity. Head not much more than half as broad as the elytra. Thorax transverse, convex, rounded at the sides and narrowed in front, not densely punctate. Elytra scarcely longer than the thorax, each with a large oblique testaceous patch extending from the shoulder to the suture behind. Hind body acuminate, densely and finely punctate, slightly shining.

In the male the hind margin of the seventh dorsal plate of the hind body is armed with five elongate teeth: the three in the middle are a little clavate at their apices; and the external tooth on each side is slender, acuminate, and directed inwards.

Seven specimens have been found of this species in Panama and three in Vera Paz.

6. **Placusa signata.**

Subdepressa, posterius acuminata, haud dense punctata, nitidula, nigra, pedibus testaceis; elytris quam prothorax paulo longioribus, oblique testaceo-signatis; antennis vix elongatis, subgracilibns, articulis 4°–10^{m} subquadratis.

Long. 2½ millim.

Hab. GUATEMALA, Balheu (*Champion*).

This insect is extremely similar to *P. obliquata*; but the individuals are of larger size, the antennæ are more elongate, and the male characters very different. In this sex the hind margin of the dorsal plate of the seventh segment of the hind body has in the middle three very short projections; the middle one, indeed, is so short that it can scarcely be detected, the one on each side of it being evidently longer but still quite short; at the outside of the plate there is a rather longer, curved, slender, acuminate tooth; these five teeth are about equidistant: there are two very fine tubercles on the middle of the sixth plate.

Five individuals have been found of this species, which is in appearance one of the most *Homalota*-like of the genus.

7. **Placusa monilicornis.**

Subdepressa, posterius acuminata, haud dense punctata, nigra, antennarum basi pedibusque testaceis, abdominis apice fusco-testaceo; antennis haud elongatis, tenuioribus, articulis 4°–10^{m} submoniliformibus.

Long. 2 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ slender; third joint slender, shorter than the second; joints fourth to tenth each about as long as broad; terminal joint short. Thorax rather strongly transverse, not very convex, and but little curved at the sides, only slightly narrowed in front, very distinctly and moderately closely punctate. Elytra a good deal longer than the thorax, rather closely punctate. Hind body finely and evenly punctate, shining.

This species is readily distinguished by its slender but not elongate antennæ. Only two individuals have been found, and they are apparently both females.

8. **Placusa longicornis.** (Tab. VI. fig. 15.)

Depressa, posterius minus acuminata, haud dense punctata, nitida, nigricans, antennarum basi pedibusque sordide testaceis, abdominis segmentis basalibus plus minusve rufescentibus; antennis gracilibus, elongatis, articulo singulo quam latitudo longiore.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ elongate and slender, not thickened outwardly; third joint elongate, quite as long as the second; fifth joint considerably, tenth very slightly, longer than broad; terminal joint elongate, but not so long as the two preceding together. Palpi yellow. Thorax transverse, evidently narrower than the elytra, a little rounded at the sides and slightly narrowed in front, finely and distinctly, not very closely punctate, but little convex transversely. Elytra a little longer than the thorax, similarly punctate, frequently with a vague paler patch of colour near the suture behind. Hind body closely and extremely finely punctate, shining.

In the male the hind margin of the dorsal plate of the seventh ventral segment is armed in the middle with an extremely minute short tooth, and on each side of this are two longer, closely approximated teeth, of which the inner is the longer; at the outside there is another, slender and slightly longer tooth; the interval between this and the two approximate teeth is rather greater than that between the latter and the middle tooth.

Sixteen individuals have been found; they vary a little in colour, but are, I fancy, all immature; possibly in fully mature individuals the reddish patch on the elytra, as well as the similar tint of the basal segments, would be scarcely visible.

9. **Placusa longipes.**

Depressa, posterius acuminata, crebrius punctata, picea, abdomine rufescente, antennarum basi pedibusque testaceis; antennis gracilibus, articulis omnibus elongatis.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ very elongate, as long as head, thorax, and elytra, not thickened externally; third joint elongate, longer than the second, each of the following joints longer than broad; terminal joint elongate, but not so long as the two preceding together. Thorax strongly transverse, a little rounded at the sides, not narrowed in front, rather closely and not very finely punctate. Elytra a good deal longer than the thorax, similarly but rather more closely punctate. Hind body elongate, very densely and finely punctate. Legs yellow, elongate.

In the male the hind margin of the dorsal plate of the seventh segment of the hind

body is armed in the middle with three elongate rather slender teeth, and on each side has a still longer, curved, fine spine.

Two specimens of this very distinct species have been found.

10. **Placusa crassula.** (Tab. VI. fig. 16.)

Fusca, capite thoraceque omnium densissime vix visibiliter punctulatis, opacis; abdomine nigricante, parce punctato, nitidulo; antennis brevibus crassiusculis; pedibus sordide testaceis.

Long. 3 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ very short; second and third joints very short, subequal in length; fourth and following joints strongly transverse; terminal joint broad and short. Head broad and short, but much narrower than the thorax, flat, very dull. Thorax strongly transverse, almost broader than the elytra, the base slightly sinuate on each side, hind angles indicated by a group of setæ, sides much rounded, the surface flat and dull. Elytra longer than the thorax, piceous, rather closely and not very finely punctate. Hind body rather convex beneath, shining, the base of each segment almost impunctate, a few punctures towards each hind margin. Legs yellow, with the femora more or less infuscate.

The dorsal plate of the seventh segment of the hind body is armed on each side with a long, slightly curved spine, and between these teeth is produced and more or less rounded. These characters exist in all the sixteen individuals discovered, and probably appertain to each sex; but certain individuals, which are probably males, have the central lobe more acuminate in the middle, and also an obscure appearance of tuberculation on the middle of the sixth segment, and a very obscure foveation of the middle of the extremity of the central lobe of the seventh.

HOPLOMICRA.

Diestotæ affinis; coxæ intermediæ sat distantes, mesosternum inter eas sat productum, apice rotundato-acuminato, cum metasterni processu perparum producto haud conjuncto.

I am obliged to establish a genus for a minute insect which has a facies intermediate between *Diestota* and *Gyrophæna*, but which cannot be associated with either of those genera on account of the incomplete middle acetabula; the raised line marking off the metasternal process is only very slightly carried forwards between the coxæ, and the point of the mesosternum being only of moderate length is thus widely separated from it, and there exists a considerable intercoxal isthmus. I have no doubt I am correct in seeing only four joints both on the front and middle tarsi; and this character separates the insect from *Homalota discrepens*, which has quite the same facies.

1. **Hoplomicra clavicornis.**

Breviuscula, parce punctata et pubescens, nitidula, nigro-fusca, antennarum basi, capite, thorace, abdominis basi pedibusque testaceis; antennis brevibus, extrorsum incrassatis; prothorace valde transverso.
Long. 2 millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ quite short, very thick externally, the four basal joints yellow, the others dark; third joint small, much smaller than the second; fourth joint small; fifth very distinctly, the following very strongly transverse; terminal joint stout, rounded. Head rather broad, but much narrower than the thorax, shining, indistinctly punctate, yellow. Thorax very strongly transverse, twice as broad as long, a little narrowed in front, base rounded, the colour like that of the head, the surface shining, very indistinctly punctulate. Elytra much longer than the thorax, fuscous, rather shining, sparingly and finely punctate. Hind body rather broad, reddish at the base, darker towards the extremity, very little punctate.

Three individuals have been found; the colour varies in accordance with the maturity of the specimen. The male has the dorsal plate of the second segment of the hind body armed with three long spines, projecting far back, the middle one straight, the one on each side converging towards the middle.

SILUSA.

Silusa, Erichson, Käf. Mark Brand. i. p. 377; Rey, Hist. Nat. Col. Fr. Brév. Bolitoch. p. 146.
Stenusa, Kr. Nat. Ins. Deutsch. ii. p. 47.

Up to the present time this is a small genus of ten species, but has a very wide distribution, occurring in Europe, North America (a single species), Chili, Ceylon, New Guinea, and Australia. One of the characters of the genus is drawn from the structure of the labial palpi, and this I have only been able to verify in an unsatisfactory manner in the Central-American species; but, so far as I have been able to see these organs, they agree with those of the European *S. rubiginosa* sufficiently to justify the classification of the Central-American forms in the same genus.

1. **Silusa hirtella.**

Ferruginea, crebrius longiusque pubescens; antennis fuscis, basi et articulo ultimo ferrugineis; capite thoraceque obsolete, elytris sat crebre et fortiter, abdomine crebrius et fortius, punctatis.
Long. 4 millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ only moderately long and stout, the two or three basal joints red, and the apical joint again pale, the other joints darker; third joint elongate, rather longer than the second; fourth rather longer than broad; of five to ten each is a little broader than its predecessor, the first of them as long as broad, the last of them slightly transverse.

Head small, not more than half as broad as the elytra, rather sparingly and indistinctly punctate. Thorax strongly transverse, with a large impression at the base in the middle, finely and indistinctly punctate. Elytra short, but longer than the thorax, distinctly but not coarsely nor densely punctate. Hind body closely and rather coarsely punctate, the punctuation towards the hind margin of each segment more scanty; the punctures on the sixth and seventh segments quite as dense as on the basal ones. Hind tarsi slender, the basal joint twice as long as the second.

Of this species four individuals have been found; they do not exhibit any external sexual marks. It is an insect that has quite the appearance of *S. rubiginosa*, and apparently agrees pretty closely in most respects therewith, but the mesosternal process is a little longer, and more completely separates the middle coxæ.

2. **Silusa similis.**

Ferruginea, crebrius longiusque pubescens, antennis fere brevibus, basi apiceque dilutioribus, pedibus testaceis; capite thoraceque obsolete, elytris fortius sed subobsolete punctatis; abdomine haud dense vix fortiter punctato.

Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, Volcan de Atitlan 2500 to 4000 feet (*Champion*).

This insect is apparently very closely allied to *S. hirtella*, but the hind body is more finely punctate, and the antennæ are shorter and of different colour; these organs have the fourth joint rather small, hardly so long as broad, and joints five to ten decidedly transverse; the apical joint is paler in colour than those preceding it, but not in such a manner as to form a marked contrast with them. The punctuation of the hind body can only be called coarse on the fourth and fifth segments; both on the more basal and apical segments it is but indefinite. In other respects the unique individual is very similar to *S. hirtella*.

3. **Silusa vestita.**

Testaceo-ferruginea, longius pubescens, antennis capiteque fuscis, illis basi et articulo ultimo testaceis; elytris abdomineque ex parte tibiisque plus minusve fusco-suffusis; abdomine irregulariter profunde punctato.

Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, Volcan de Atitlan 2500 to 3500 feet (*Champion*).

Antennæ rather short, much thickened towards the extremity; third joint rather elongate, about equal to the second; fourth about as long as broad; tenth rather strongly transverse; terminal joint forming a strong contrast in colour with those preceding. Head only half as broad as the elytra, sparingly punctate. Thorax strongly transverse, twice as broad as long, a good deal narrower than the elytra, rather coarsely punctate, and indistinctly impressed towards the base in the middle. Elytra longer than the thorax, of vague coloration, the shoulders broadly paler than the other parts, sparingly punctate, but with conspicuous pubescence. Hind body with a deep, rather

coarse punctuation, which is not so dense and distinct on the basal segments as on the apical, its greatest development being on the sixth plate; the colour is ferruginous, but the dorsal plates are more or less vaguely marked with piceous in the middle of each. Legs yellow, tibiæ infuscate.

Four specimens have been sent by Mr. Champion.

4. **Silusa subtilis.**

Ferruginea, parum nitida, subtiliter pubescens, antennarum basi et apice pedibusque testaceis; elytris extrorsum magis obscuris, dense punctatis; abdomine obsolete punctato.

Long. $2\frac{1}{4}$–$3\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ rather short, a good deal thickened externally, the three basal joints yellow, the following very dark red, the extremity again yellowish; third joint about as long as the second; fourth small, scarcely so long as broad; fifth to tenth transverse; terminal joint large. Head narrow, only about half as broad as the elytra, quite obsoletely punctate. Thorax not very strongly transverse, narrowed towards the front; hind angles moderately distinct, rather obtuse; the surface finely and closely punctate, scarcely transversely impressed in front of the base. Elytra longer than the thorax, densely punctate, not shining. Hind body with the second and third segments finely and rather closely punctate; on the following segments there is also a punctuation, but nearly confined to the basal portion of each, so that, unless extended, the segments appear almost impunctate.

This species is readily distinguished from the others of the genus by the more densely punctate elytra; it has the mesosternal lamina even more largely developed than it is in *S. hirtella*. Two of the three individuals agree closely, except that one of them is a male, while the third is much smaller and of paler colour, but is, I have no doubt, a poorly developed individual of the same species; the male has some obscure granules scattered on the dorsal plates of the sixth and seventh segments, and the hind margin of the latter is very obscurely crenulate.

5. **Silusa maura.**

Nigerrima, tarsis rufo-testaceis, antennarum articulo basali fusco, crebre, fortiter profundeque punctata, evidenter flavo-pubescens, sat nitida.

Long. 4 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ not elongate, rather slender, black, with the basal joint obscurely paler; second and third joints subequal in length; eighth to tenth rather transverse. Head narrow, rather closely deeply punctate. Thorax strongly transverse, with a conspicuous coarse punctuation, and a depression at the base in the middle. Elytra not closely but distinctly punctate. Hind body not closely but rather coarsely punctate.

This insect appears closely allied in structure to *S. hirtella*, and, like it, has quite the facies of the well-known *S. rubiginosa*; it differs much, at first sight, from *S. hirtella*, in consequence of the dark colour and coarser sculpture. Only a single individual has been found.

6. **Silusa opacella.** (Tab. VI. fig. 17.)

Subparallela, nigro-fusca, opaca, obsoletissime punctata, pedibus sordide testaceis; antennis crassiusculis, articulis 4°–10^{m} fortiter transversis.

Long. 3–3½ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ short and stout; the three basal joints very obscurely paler than the others; third joint rather shorter than the second; fourth to tenth transverse; terminal joint stout. Head a good deal narrower than the thorax, dull, invisibly punctate. Thorax strongly transverse, dull, invisibly punctate. Elytra a good deal longer than the thorax, dull, very obsoletely punctured. Hind body densely punctate, the sculpture not quite so obsolete as on the more anterior parts of the body, and on the apical segments a little less dense than on the basal ones.

This insect has a very Homalotoid appearance, and agrees with the genus *Homalota* in the structure of the sterna, the middle coxæ being contiguous, and the meso- and metasternal processes widely separated. The basal joint of the posterior tarsus is short, but distinctly longer than that following it. The male has a tubercular carina on the middle of the sixth dorsal plate, and the hind margin of the following plate provided in the middle with four or five closely placed prominent teeth, and at each side with a more remote tooth.

7. **Silusa gracilis.** (Tab. VI. fig. 18.)

Elongata, nigerrima, parcius pubescens, nitida; antennis fuscis, basi rufo; pedibus piceis, tarsis dilutioribus; prothorace parum transverso, anterius angustato, fortiter punctato; abdomine parum punctato, segmentis 2°–5^{m} basi profunde, transversim depressa.

Long. 4¼ millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ slender at the base, a good deal thickened outwardly; third joint as long as the second; fourth quite slender, longer than broad; fifth quite as long as broad; tenth rather strongly transverse; terminal joint moderately large. Head quite narrow, rather elongate and exserted, shining, with distant punctures. Thorax of rather peculiar form, owing to its being narrowed from the middle to the front, with the anterior angles greatly deflexed, the hind angles distinct, the surface rather coarsely punctate, without any basal impression. Elytra rather elongate, longer than the thorax, rather coarsely punctate, the punctuation closer at the base than towards the hind margin. Hind body rather slender, shining black; segments two to five each

deeply transversely impressed at the base, and with some coarse punctures in the depression, elsewhere almost impunctate, or rather with but few and indistinct punctures.

Although this insect has more the appearance of an *Ocala* or a *Calodera* than of the other species of *Silusa*, still I have not been able to detect any reason for placing it elsewhere than in this genus; the ligula appears to be elongate and quite linear. Only two individuals have been found.

8. **Silusa parvula.**

Minor, ferruginea, nitida, parce punctata, parum pubescens, antennis tibiisque fusco-rufis, illis basi et apice testaceis; capite, thorace abdomineque fere glabris, elytris parce punctatis.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Calderas (*Champion*).

Antennæ rather short, a good deal thickened outwardly; the two basal joints yellow, the others obscure red, the terminal joint being again paler; third joint rather shorter than the second; fourth about as long as broad; fifth scarcely, tenth strongly transverse; terminal joint moderately large. Head rather broad, but a good deal narrower than the elytra. Thorax strongly transverse, narrower than the elytra, nearly straight at the sides, shining, and but very little punctate, without basal impression. Elytra rather short, but longer than the thorax, rather sparingly and not finely punctate, the colour a little more obscure behind towards the outer angles. Hind body rather broad, almost impunctate.

Of this obscure species only a single, badly preserved, individual has been found; the diminished punctuation and pubescence readily distinguish it from the other Central-American *Silusæ*.

EUVIRA.

Caput exsertum, collo brevi et sat angusto. Coxæ intermediæ parum distantes sed haud contiguæ, haud magnæ, acetabulis posterius sat argutis. Tibiæ tarsique tenues.

The above brief characters will not apply to any other genus of the Aleocharinæ having like these insects four joints on the front and middle, five on the posterior, feet. *Autalia* and *Eudera* appear to be the genera to which *Euvira* comes nearest, but it is very distinct from either, the former genus having the mesosternum with a free raised edge behind, and the middle acetabula quite indefinite, and *Eudera* possessing widely separated middle coxæ. The insects of this new genus are very minute, and possess a very short prothorax, shaped somewhat as in *Oligota*; the sides of the prothorax are not abruptly inflexed, and the prosternum is small; the head is truncate behind; the trophi I cannot see clearly, but they appear not to be remarkable. The antennæ are short and thickened towards the extremity. The hind tarsi are very slender, but not very long; their basal joint is elongate, about equal to the two following together.

The species are apparently numerous in Central America; but I am not acquainted with any from other regions; they are apparently very similar to one another, and will be difficult to discriminate.

1. **Euvira nigra.**

Nigra, antennis flavis, articulo ultimo nigricante; capite dense fortiterque punctato; prothorace convexo, parvo, elytris quam hic multo longioribus; abdomine crebre substrigoso-punctato.
Long. $1\frac{3}{4}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ yellow, with the terminal joint dark, and the preceding one somewhat infuscate, short; third joint short, much shorter than the second; fourth to tenth each a little broader than its predecessor, all short, the first two or three of them quite small, the penultimate joints strongly transverse; terminal joint stout, obtuse. Head small, only about half as broad as the elytra, convex, very coarsely punctate. Thorax strongly transverse, a little narrower than the elytra, the front angles greatly depressed, surface coarsely punctate. Elytra rather coarsely punctate. Hind body parallel, with a rather close and regular peculiar punctuation, consisting of fine longitudinal elevations. Legs black, the tarsi fuscous.

In the male there are no impressions on the head or thorax, but the seventh dorsal plate bears a few rough granules; this plate is small, and has its hind margin rounded.

I have had six specimens of this species for examination; the dark legs and the yellow antennæ with only their extremity dark appear to be constant characters.

2. **Euvira longula.**

Sat elongata, angustula, parallela, nigra, antennarum dimidio basali flavo, tibiis tarsisque fusco-testaceis; capite dense fortiterque punctato; prothorace convexo, parvo, elytris quam hic multo longioribus; abdomine crebre substrigoso-punctato.
Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ short and stout; the five basal joints yellow, the others dark, the basal joints rather stout, the fourth and fifth not slender.

In the male the upper surface of the head is flat on the middle; the sixth dorsal plate is rather closely covered with fine, elongate granules, and the seventh bears more conspicuous granules; the hind margin of the latter is truncate in the middle.

The species differs from *E. nigra* by the more elongate form, by the thicker basal portion of the antennæ, by the fact that these have a larger number of joints dark, and by the flattening of the upper surface of the head in the male.

The two individuals found by Höge are in bad condition, and their punctuation is consequently obscure. From Cerro Zunil there is only a single female; and under these circumstances some doubt must exist whether it be really the same species.

3. **Euvira fuscipes.**

Sat elongata, angustula, parallela, nigra, sat nitida, antennarum dimidio basali flavo, pedibus fuscis; capite crebre punctato; prothorace convexo, parvo, elytris quam hic multo longioribus; abdomine crebre substrigoso-punctato.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, near the city and at Zapote (*Champion*).

Antennæ with the five or six basal joints yellow, the others darker. Elytra not densely punctate, the punctuation rather indefinite.

In the male there is a rather broad, smooth, longitudinal space along the middle of the thorax; this space is a little depressed, and has a dull appearance in contrast with the rest of the surface; the sixth dorsal plate is but little granulate, and the seventh, though rather closely granulate, has a broad space at the extremity smooth.

This species is again very similar to *E. nigra* and *E. longula*; but the punctuation of the surface is less dense, and the male characters different. Four individuals have been found.

4. **Euvira godmani.** (Tab. VI. fig. 19.)

Nigra, parum pubescens, abdomine apicem versus latiore, antennarum basi flava, tibiis tarsisque fusco-testaceis; dense fortiterque punctata; elytris quam prothorax longioribus.

Long. $2\frac{1}{3}$ millim.

Hab. GUATEMALA, near the city, and Senahu (*Champion*).

This is apparently the largest of the small and obscure species of this genus, and its punctuation is both coarse and close. The antennæ are short and rather stout; the four or five basal joints yellow, the others dark; the fourth and fifth joints are rather stout and transverse, the following ones strongly transverse. The elytra are evidently longer than the thorax, and are coarsely and distinctly and closely punctate. The hind body has a close sculpture of rather elongate, very fine raised granules or short lines.

In the male the disk of the head and of the thorax are conspicuously hollowed; the sixth dorsal plate bears numerous fine, and the seventh coarser, granules.

Three individuals, all males, have been found.

5. **Euvira difficilis.**

Fusca, parum pubescens, subnitida, antennarum dimidio basali pedibusque flavis, illis extrorsum nigris, dense fortiterque punctata; elytris quam prothorax longioribus.

Long. vix 2 millim.

Hab. GUATEMALA, near the city, and San Gerónimo (*Champion*).

Antennæ not stout at the base; the fourth joint not, or only obscurely, transverse; the six basal joints yellow, the others dark. Punctuation of the upper surface coarse and dense throughout.

Only two individuals, rather immature, have been found; so far as I can judge they pertain to a species very similar to *E. godmani*, but they are smaller, not so black,

and have the antennæ decidedly smaller, and the male characters apparently less conspicuous. One of the individuals is of this sex; it has the upper surface of the head flat or slightly hollowed; the granulation of the sixth and seventh dorsal plates much as in *E. godmani*, but rather finer.

6. **Euvira minuta.**

Angustula, parallela, subdepressa, minus pubescens et punctata, subnitida, nigro-fusca, prothorace plus minusve dilutiore; antennis pedibusque flavis, illis articulo ultimo obscuro; elytris quam prothorax multo longioribus. Long. $1\frac{3}{4}$ millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, near the city (*Champion*).

Antennæ short, much thickened externally; the terminal joint nearly orbicular. Head not closely and scarcely coarsely punctate; punctuation of the thorax rather closer, that of the elytra and hind body rather indistinct, not close.

This little insect has a less punctate surface than any of the preceding species; and, if I am right in considering I have both sexes before me, the male characters are very slight, there being only an obscure granulation on the sixth and seventh dorsal plates of the hind body.

7. **Euvira debilis.**

Angustula, subdepressa, minus pubescens et punctata, subnitida, nigro-fusca, antennarum dimidio basali flavo, pedibus fusco-testaceis; elytris quam prothorax multo longioribus. Long. 2 millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ short, much thickened externally; the six basal joints yellow, the others darker. Head narrow, much narrower than the thorax, rather coarsely punctate. Thorax rather coarsely punctate. Elytra much longer than the thorax, not closely, rather coarsely punctate. Hind body shining, with coarse, substrigose punctuation.

Only a single specimen has been found; it is a male, and has the upper surface of the head slightly impressed on the middle; the thorax has a shallow, broad, longitudinal depression along the middle; this depression is dull and impunctate; the last dorsal plate is rather obscurely granulate. Two immature specimens from the same locality, quite pale in colour, are possibly females of the species.

8. **Euvira discedens.**

Sordide testacea, antennis extrorsum abdomineque ante apicem obscurioribus, haud nitida, minus fortiter et argute punctata; antennis majoribus, extrorsum crassioribus, articulo tertio haud brevi; elytra quam prothorax paulo longioribus. Long. 2 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ nearly as long as head, thorax, and elytra; third joint only slightly shorter than the second; fourth not transverse, but the tenth strongly so. Head much

narrower than the thorax, rounded behind. Thorax very transverse, twice as broad as long, only indistinctly punctate. Elytra not much longer than the thorax, rather sparingly sculptured. Hind body more closely strigose-punctate.

The unique individual of this very distinct species is no doubt a male; the whole of the upper surface of the head is very deeply hollowed, and extremely densely and finely punctate; the apical dorsal plates are almost destitute of granulation.

EUDERA.

Eudera, Fauv. Bull. Soc. L. Normand. x. p. 257 (1866).

This genus was established for a small Chilian insect, and the only subsequent addition to it has been the *E. cava*. Whether *E. cava* should not rather be referred to *Ophioglossa*, Fauv., is doubtful; but as it is uncertain whether *Ophioglossa* and *Eudera* are really distinct, this point is not of much importance.

1. Eudera cava.

Eudera cava, Sharp, Tr. Ent. Soc. Lond. 1876, p. 40[1].

Hab. NICARAGUA, Chontales (*Janson*).—SOUTH AMERICA, Para [1].

GANSIA.

Statura gracilis. Caput exsertum, collo discreto, sat angusto. Coxæ intermediæ distantes, acetabula arguta. Prothoracis latera haud inflexa.

The insects for which this genus is established are of small size, but are amongst the most elegant of the Staphylinidæ; they are of Falagrioid form, but not only do they differ from these members of the Myrmedoniina by the tarsal structure, but also when careful examination is made they appear, independent of that fact, to be quite isolated, and they should apparently be placed as the culminating point of the Bolitocharina, the *Falagria* group of genera occupying a similar position in the Myrmedoniina. The antecoxal piece of the prosternum is quite small, but the supracoxal portion is large, and bears on the middle in front a prominent small lamina or plate; behind the coxæ the prosternum is membranous, and the side pieces of the prothorax are small and are not inflexed. The mesosternum is constricted just behind the front margin so as to form a broad, very short neck, and the middle coxæ are rather widely separated, and their definite acetabula are surrounded entirely with a fine raised margin; the metasternum is much produced between the coxæ, so that its process is longer than that of the mesosternum, the two processes being intimately connected by a somewhat indefinite suture.

The place of the genus is near *Euvira* and *Autalia*, from each of which, however, it is abundantly distinct by the structure of the prothoracic and mesosternal pieces. The only species that can be assigned to it, besides the two here described, is the Amazonian *F. varicornis*, Shp.

1. **Gansia bicolor.** (Tab. VI. fig. 20.)

Elongata, parum pubescens et parum punctata, fusco-rufa, femoribus basi tarsisque pallidis, abdominis segmentis duobus basalibus ad basin late, tertio angustius, rufo-testaceis ; antennis elongatis, gracilibus, variegatis, basi testacea, articulis tribus penultimis nigro-fuscis, ultimo fere albido.
Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, El Tumbador 2500 feet, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ slender and elongate; the basal joint stout and long, articulated with the second joint in such a manner that the antennæ are bent backwards at this spot more readily than from the base; second joint elongate and slender; third also long and slender, a little longer than the second; the following joints also long and slender, but each a good deal shorter and slightly broader than its predecessor, the tenth joint being scarcely so long as broad; terminal joint elongate, longer than the two preceding together. Head almost impunctate, deeply impressed along the middle. Thorax about as long as broad, truncate in front, anterior angles rounded, slightly narrowed from the widest part backwards, but again a little broader at the base, very broadly impressed along the middle, but not canaliculate, very little punctate. Elytra rather convex, broad, but little longer than the thorax, very sparingly punctate. Hind body rather narrow and elongate, very little constricted at the base; first and second segments reddish yellow, but black at the hind margins; third segment yellow-red at the base only, the other segments black, the surface shining, very little punctate; the basal three segments each very deeply impressed at the base. Legs elongate and very slender, nearly black; the base of the femora and the tarsi very pale yellow.

Falagria varicornis, Sharp, is allied to this elegant and delicate species. Several specimens of *G. bicolor* have been found by Mr. Champion. The male has the antennæ more elongate than they are in the female, and the basal joint much enlarged.

2. **Gansia tibialis.**

Elongata, parum pubescens et parum punctata, testacea, abdominis segmentis 3° et 4° nigro-signatis, tibiis quatuor posterioribus prope basin fuscis, antennarum articulis penultimis nigro-fuscis, ultimo fere albido.
Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, 4000 to 5000 feet (*Champion*).

Antennæ scarcely so long as head, thorax and elytra, a good deal thickened towards the extremity; the eighth joint about as long as broad; ninth and tenth transverse. Head rather broad, narrowed gently from the eyes to the neck. Thorax not so long as broad, broadly but indistinctly impressed along the middle. Elytra sparingly but somewhat roughly punctate. Third segment of hind body in greater part black, the base, however, yellow, the yellow colour being more extended backwards at the sides than in the middle; fourth segment similarly coloured, except that the black portion reaches in the middle to the preceding segment, so that only a patch on each side is yellow.

This species is allied to *G. bicolor*, but besides the differences in colour, it has the antennæ and prothorax less elongate. The unique individual, in very bad condition, found by Mr. Champion is probably a female.

TACHIONA.

Tarsi crassiusculi, tibiarum tantum dimidio longitudinis, posteriorum articulo basali brevi, quam sequens vix longiore. Coxæ intermediæ distantes, acetabulis integris, mesosterno et metasterno inter se sutura recta arcte conjunctis.

This genus is established for a peculiar Aleocharid of broad form, acuminate behind, and flat upper surface, and thus approaching in appearance to the genera *Dinusa* and *Dinarda*, to neither of which, however, does it appear to have any affinity. The tarsi are short and stout, and those of the hind legs are five-jointed; but those of the anterior and middle legs I am tolerably certain are only four-jointed, so that the genus must be placed in the *Bolitocharaires* of Rey, where, however, it is apparently quite isolated. The head is very short and broad and is much immersed in the thorax, and the eyes are rather large; the maxillary palpi are of the ordinary Aleocharid form; the mentum has in front a broad semicircular emargination filled by a membrane, and the labial palpi are apparently short and inconspicuous, while the lobes of the maxillæ are elongate and prominent; the suture of the genæ is without a raised margin, and the maxillary cleft is remarkably large. The sides of the prothorax beneath are flat, but not inflexed, so that they are quite visible, and the prosternum is extremely short; the middle coxæ are rather widely separated; the mesosternum is but little produced between them, and is connected with the metasternum by a quite straight suture, which is placed as far forwards as the middle of the acetabulum; there is no raised line on the side of the wing-case, and the metathoracic epimeron and the hind coxæ are not prolonged so far outwards and upwards as to be visible from above or indeed from the side.

1. **Tachiona deplanata.** (Tab. VI. fig. 21.)

Lata, posterius acuminata, supra deplanata, capite, elytrorum angulo externo antennisque (basi excepto) nigris; prothorace in medio abdomineque apicem versus nigro-maculatis; prothorace valde transverso, angulis posterioribus discretis, obtusis.

Long. 5½ millim.

Hab. Mexico, Cordova (*Höge*).

Antennæ thick, quite as long as head and thorax; the three basal joints yellow, broad; the third much longer than the second, which is remarkably short; fourth transverse, a good deal narrower than those following it; fifth to tenth similar to one another, each very strongly transverse; terminal joint elongate, about as long as the three preceding together. Head broad, but very much narrower than the thorax, sparingly punctate and pubescent, shining. Thorax very transverse, rounded at the sides and a little narrower in front than behind, lateral margin very distinct, the surface

sparingly punctate, the punctures coarser on the middle than at the sides, the colour castaneous yellow, black along the middle. Elytra longer than the thorax, rather closely and moderately finely punctate, broadly black at the outer angle; hind margin scarcely sinuate. Hind body flat, shining, regularly moderately closely punctate, the two or three apical segments more or less marked with black on the middle. Legs stout, yellow, the tibiæ more obscure in colour than the femora, and the tarsi still darker, so as to be piceous.

Three individuals have been found; they all have the dorsal plates of the sixth and seventh segments granulate, and the rather narrow hind margin of the seventh truncate; I think they are females.

MYLLÆNA.

Myllæna, Erichson, Käf. Mark Brand. i. p. 382.

About twenty-five species are at present comprised in this genus, which, like so many others of those at present accepted in the Staphylinidæ, has a very wide distribution, species occurring even in the Sandwich Islands. It is one of the most difficult of all the genera of the family to deal with, owing to the great resemblance of the species and the absence of any important sexual or structural characters to distinguish them. The habits of these creatures, which run swiftly in muddy places or live amongst damp moss, render it certain they are not artificially distributed.

1. Myllæna mollis.

Densissime subtilissimeque punctulata, brevissimeque sericeo-pubescens, subopaca, fusca, prothorace dilutiore, pedibus palpisque dilute testaceis; antennis articulis basali et apicali testaceis, gracilibus sed parum elongatis.

Long. circiter $2\frac{1}{4}$ millim.

Hab. Guatemala, near the city (*Champion*).

Antennæ longer than head and thorax; first joint very short, half as long as the second; third rather more slender and shorter than second; fifth to tenth differing but little from one another, each very distinctly longer than broad; tenth paler than those preceding it. Thorax evidently paler in colour than the elytra, the base truncate, just perceptibly sinuate on each side near the hind angles. Elytra scarcely longer than the thorax. Hind body more or less distinctly testaceous behind. Legs stout, clear yellow.

This species is very similar to the European *M. intermedia*, and the individuals of the two species are of about the same size; *M. mollis* is, however, rather the more fragile and is paler in colour, its antennæ are evidently shorter, as are also the legs.

Two typical individuals have been found; a third, from the same locality, of rather more slender form and darker colour, also probably pertains to the same species. An

individual from the Rio Naranjo, and another from San Gerónimo, are slightly smaller and paler, but can scarcely be considered distinct.

2. Myllæna fragilis.

Densissime subtilissimeque punctulata, brevissimeque sericeo-pubescens, subopaca, fusca, pedibus palpisque testaceis; antennis elongatis, articulis basali et apicali testaceis.

Long. circiter $2\frac{1}{4}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

The individuals of this species are excessively similar to those of the European *M. intermedia*, but they do not quite agree; the antennæ of the two are nearly similar, but are a little more dilute in colour in *M. fragilis*, especially towards the extremity, and the terminal joints are rather stouter in proportion to their length. The colour of the American insect is probably more dilute, its punctuation a little finer, and the base of the thorax is not sinuate on either side. In *M. fragilis* the antennæ are a good deal longer than they are in *M. mollis*.

Two badly preserved individuals have been found.

3. Myllæna debilicornis.

Densissime subtilissimeque punctulata, brevissimeque sericeo-pubescens, pallide fusca; antennis, palpis pedibusque testaceis, illis elongatis gracilibus.

Long. circiter $2\frac{1}{4}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

This species is again very closely allied to the two preceding, but is readily distinguished by the very elongate and slender, pale antennæ, which are fully as long as head, thorax and elytra. There is a scarcely perceptible sinuation on each side of the base of the prothorax, just enough to render the hind angles rectangular. The sinuation of the hind margin of the elytra is about as great as in *M. intermedia*.

Only one individual has been found.

4. Myllæna obtusa.

Densissime subtilissimeque punctulata, brevissime sericeo-pubescens, fusca, pedibus testaceis; prothorace angulis posterioribus fere obtusis, elytris quam hic haud longioribus; antennis sat elongatis, subgracilibus.

Long. circiter $2\frac{3}{4}$ millim.

Hab. Guatemala, Torola 1000 feet (*Champion*).

Antennæ longer than head and thorax, rather stout for this genus, in colour not paler than the body; terminal joint elongate, scarcely paler than those preceding. Thorax with the base slightly rounded, and no sinuation at the hind angles, so that these are slightly obtuse. Elytra slightly sinuate at the outer angle.

This insect is closely allied to the European *M. glauca*, Aubé, but is rather smaller and darker in colour, and has the hind margin of the elytra less sinuate at the outer angle. Only one individual has been found.

5. **Myllæna robusta.**

Densissime subtilissimeque punctulata, brevissime sericeo-pubescens, nigra, antennis fuscis, palpis pedibusque sordide testaceis; prothorace basi subrotundato, angulis posterioribus obtusis; antennis minus elongatis subgracilibus.

Long. circiter $2\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ about as long as head and thorax, dark; the basal joint sordid yellow; joints four to ten, each but little longer than broad. Thorax with the base a little rounded and not sinuate, so that the hind angles are slightly obtuse. Elytra rather longer than thorax, and only slightly sinuate at the outer angle.

The broader form, dark colour, and shorter antennæ render this species easily recognized. Only one badly preserved individual has been found.

Group **OLIGOTINA.**

All the tarsi four-jointed.

This group will comprise not only the forms with ten-jointed, but also those with eleven-jointed antennæ, so that *Pronomæa* and *Diglossa*, as well as *Euryglossa*, will be located in it; the new genera *Bamona*, *Saphoglossa*, and *Barychara* indicate that this association will probably prove to be a natural one.

BAMONA.

Coxæ intermediæ contiguæ. Genæ haud marginatæ; palpi mandibulæque haud elongati; antennæ undecim-articulatæ. Tarsi omnes quadriarticulati, articulo ultimo apicem versus paulo crassiore.

This genus should find its place near *Diglossa* and *Pronomæa*, from both of which genera it differs by the ordinary trophi, and from the latter more especially by the quite contiguous middle coxæ. The characters of the genus are drawn from *B. gracilis*, and only fully apply to the three species placed at the head of the genus. The form is that of *Falagria* or the slender *Tachyusæ*, and the head is borne on a slender neck; the side pieces of the prothorax are not inflexed, and the prosternum in front of the coxæ is large. The middle coxæ are contiguous throughout the greater part of their length, so that the short mesosternal process is largely separated from the metasternum. The tarsi are rather elongate, the basal joint forming nearly half the length of the tarsus. These species are probably riparial in their habits like our *Tachyusæ*. The other species I have provisionally referred to the genus are of less slender form and have a more Homalotoid appearance, and the tarsi are short; but at present I do not think it is necessary to isolate them generically, nor could I, from the material before me, ascertain their characters satisfactorily.

1. **Bamona concolor.**

Gracilis, nitida, subtilissime pubescens et punctulata, nigra, antennis pedibusque fusco-testaceis, illis in medio plus minusve obscuratis; prothorace elongato, quam elytra multo angustiore; abdomine fere impunctato, segmentis basalibus margine posteriore utrinque parcius albido-ciliato.

Long. 2½ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ rather elongate, little thickened outwardly, obscurely yellowish, with three or four joints in the middle much darker; third joint rather shorter than the second, fourth longer than broad, tenth slightly transverse. Thorax slender, rather longer than broad, scarcely narrowed behind, without channel or impression. Elytra rather longer than the thorax, entirely black, excessively finely punctulate. Hind body almost impunctate, the three or four basal segments furnished on each side at the hind margin with three or four erect white setæ. Legs infuscate yellow, the tarsi yellow.

A series of fourteen examples has been found; they show some variation in colour, dependent probably on the degree of maturity; occasionally the three or four basal segments of the hind body are paler in colour, and in some specimens the variegation of the antennæ is less conspicuous.

2. **Bamona gracilis.** (Tab. VI. fig. 22.)

Nitida, subtilissime pubescens et punctata, sordide rufa, antennis in medio, capite abdomineque apicem versus, fuscis, elytris fusco-rufis, margine apicali flavescente humeris plus minusve dilutioribus; prothorace elongato quam elytra multo angustiore.

Long. 2½ millim.

Hab. GUATEMALA, Rio Naranjo 450 feet (*Champion*).

Very closely allied to *B. concolor*, but of rather more slender form and dilute colour, and to be distinguished from the immature individuals of the darker species by the fact that the hind margin of the elytra is always paler; the antennæ, too, are rather more elongate, so that the penultimate joint is scarcely transverse, and the head is rather more elongate and narrow.

A series of sixteen examples shows no notable variation.

3. **Bamona marginata.**

Sat nitida, subtilissime pubescens et punctulata, fusca, thorace rufescente, antennis pedibus elytrorumque basi et apice testaceis; abdomine segmentis 2°–5ᵐ dense subtilissime punctulatis.

Long. 2½ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ entirely yellow; third joint not longer than the second, the tenth scarcely transverse. Head about as broad as the thorax, excessively finely punctulate. Thorax slightly longer than broad, narrower than the elytra, excessively finely punctulate, shining. Elytra rather longer than the thorax, with the hind margin broadly pale

yellow, the base yellowish, the middle broadly dark, very finely and densely punctulate, little shining. Hind body densely and finely punctulate, with conspicuous ciliation on the hind margins of segments 2–4. Legs clear pale yellow.

The coloration of this species will readily distinguish it from *B. gracilis* and *B. concolor*, to which it is very closely allied. Only a single individual has been found.

4. **Bamona minuta.**

Subtilissime punctulata et pubescens, nigro-fusca, antennis fuscis basi dilutiore, pedibus pallide testaceis; prothorace subquadrato, vix punctulato; abdomine densissime subtilissime punctato.
Long. vix 2 millim.

Hab. GUATEMALA, Coatepeque 1300 feet (*Champion*).

Antennæ rather elongate, infuscate red, with the base paler; third joint rather shorter than the second; the tenth scarcely transverse. Head quadrate, nearly as broad as the elytra, with narrow neck, excessively minutely punctate, with a rather large depression in front. Thorax hardly so long as broad, a little narrower than the elytra, a little narrowed behind, excessively finely and indistinctly punctulate, with a flattening or slight depression of the surface in front of the base in the middle. Elytra elongate, much longer than the thorax, excessively finely and closely punctate. Hind body closely and very finely punctate.

This species differs from those preceding by the shorter and broader thorax, and by possessing short tarsi. It is described from a unique individual.

5. **Bamona brevicornis.**

Minuta, subparallela, brunnea, capite antennisque fuscis, harum basi pedibusque testaceis; prothorace quadrato, subtiliter punctato; abdomine sat crebre punctato; antennarum articulis 5°–10^{m} transversis.
Long. $2\frac{1}{8}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ rather short and stout; third joint shorter than the second; fourth to tenth each rather strongly transverse. Head subquadrate, a little narrower than the thorax and elytra, rather closely and finely punctulate, not shining. Thorax scarcely so long as broad, slightly narrower than the elytra, nearly straight at the sides, very finely punctulate, slightly shining. Elytra rather longer than the thorax, closely and finely punctulate, not shining. Hind body not shining; segments 2–4 moderately closely and finely punctate, the following segments more sparingly. Legs rather short, yellow.

This insect does not possess the Falagrioid appearance of those I have placed before it, but, on the contrary, resembles a small *Homalota*, and it does not exhibit any incrassation of the terminal joint of the tarsi. Only one individual has been found.

6. **Bamona plebeia.**

Subparallela, subtilissime punctulata, rufescens, capite antennisque (harum basi excepta) fusco-rufis, pedibus testaceis; prothorace subquadrato, subtiliter punctulato; pedibus antennisque crassiusculis, harum articulis 4°–10ᵐ transversis; abdomine parce punctato.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Coatepeque 1300 feet (*Champion*).

Antennæ stout, not elongate; third joint short and stout, shorter than the second; fourth and following joints transverse, but not strongly so. Head with distinct neck, nearly as broad as the thorax, very finely punctate. Thorax slightly broader than long, a little narrower than the elytra, a little narrowed behind, very finely punctulate. Elytra longer than the thorax, very finely and closely punctulate, not shining. Hind body only sparingly punctate; the sixth segment, as well as the transverse impressions at the base of those preceding, impunctate. Legs stout.

Only a single specimen has been found; though apparently very closely allied to *B. parallela*, it is smaller and has shorter joints to the antennæ.

7. **Bamona parallela.**

Subtilissime punctulata, fere opaca, rufescens, capite, antennis abdomineque ante apicem subobscuratis, pedibus testaceis, crassiusculis; prothorace quadrato; antennis sat elongatis, articulis 4°–10ᵐ subquadratis; abdomine parce punctato.

Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, San Gerónimo, and Rio Naranjo 450 feet (*Champion*).

Antennæ moderately stout, rather elongate; third joint stout, nearly as long as the second; fourth to tenth each about as long as broad. Head subquadrate, densely and finely punctate, not shining. Thorax about as long as broad, slightly narrower than the elytra, slightly narrowed behind, closely and very finely punctate. Elytra longer than the thorax, densely and finely punctate, not shining. Hind body only sparingly punctate; the sixth segment, as well as the transverse depression at the base of those preceding, almost impunctate.

Only a single individual has been found in each locality; the one from the Rio Naranjo is rather smaller, and has the antennæ rather more slender than the other.

8. **Bamona robusta.**

Subparallela, subtilissime punctulata, nigro-fusca, elytris paulo dilutioribus, pedibus testaceis; antennis elongatis, articulis nullis transversis; prothorace subquadrato, angustiore quam elytræ, subtilissime punctulato; elytris omnium densissime subtilissimeque punctulatis, opacis; abdomine parce punctato.

Long. vix 4 millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ elongate and rather slender; third joint elongate, scarcely so long as the second; fourth to tenth each a little longer than broad. Head nearly as broad as the thorax, closely and finely punctate; neck rather broad. Thorax evidently narrower

than the elytra, quite as long as broad, nearly straight at the sides, very finely punctate, a little shining. Elytra elongate, longer than the thorax, remarkably densely and finely punctulate. Hind body only sparingly and finely punctate; sixth segment almost impunctate. Legs stout, clear yellow.

This is another species having much the aspect of such species of *Homalota* as *H. languida*. The unique individual found is apparently a male; the elongate sixth segment has a short elevated carina at its base, and the hind margin of the second segment is prolonged backwards in the middle so as to form a spine.

SAPHOGLOSSA.

Prothorax marginibus inflexis omnino occultis; prosternum etiam in medio brevissimum. Coxæ intermediæ late distantes. Mesosterni processus latus in medio, carina integra elongata. Metasterni processus anterius cum mesosterno conjunctus, apice rotundato-truncato, crasse marginato. Parapleuris angustis fere linearibus.

The insect for which I propose this generic name is a very peculiar one, so that I have no doubt it is quite distinct from any other genus known to me, although the fragile condition of the unique individual, the only one that has been captured, allows me only to observe a portion of its characters. The general form makes an approximation to *Myllæna*; the trophi I cannot see at all distinctly, but they are apparently not of the *Myllæna* type. The genæ are strongly margined, and the under surface of the head is largely and deeply impressed on each side (probably allowing a very perfect inflection). The convex prothorax has the acute sides and completely inflexed side pieces seen in *Aleochara* and *Oxypoda*. The metasternal process is moderately produced between the middle coxæ, and is connected with the mesosternum; but the suture marking it off is still visible at the point of junction, and is arcuate, thus differing materially from the quite, or nearly, straight suture existing in the genera near *Diestota*. The side piece of the metasternum is remarkably narrow and linear, and the internal laminæ of the hind coxæ are elongate and but little divergent. The legs are elongate and remarkably slender: the structure of the tarsi is very obscure, owing to their tenuity, and to their having been covered, in this individual, with gum-tragacanth; but I think the anterior and middle are only four-jointed, and the posterior I think to be also four-jointed, with elongate basal joint. These characters will bring it near the Chilian genus *Pachyglossa*, Fauvel, from which, however, it differs very strongly by the widely separated middle coxæ.

1. **Saphoglossa pictipennis.** (Tab. VI. fig. 23.)

Posterius acuminata, nigra, antennarum basi tibiisque anterioribus testaceis, elytris rufo-variegatis, abdominis apice rufo-testaceo, tibiis posterioribus et intermediis geniculis flavescentibus; antennis pedibusque elongatis gracilibus.

Long. 3 millim.

Hab. Panama, Volcan de Chiriqui 8000 feet (*Champion*).

Antennæ as long as head, thorax, and elytra, slender, not at all thickened towards the extremity; the five basal joints yellow, the others infuscate; third joint shorter than second, fourth longer than broad; from this to the tenth, each is a little longer than its predecessor; the terminal joint elongate. Head small, black, sparingly punctate. Thorax very convex, broader than long; the anterior angles extremely deflexed, the surface sparingly punctate. Elytra a good deal longer than the thorax, obscure reddish, largely black in an irregular manner at the sides, closely punctate. Hind body densely punctate, the seventh segment and hind portion of the sixth yellow. Legs very slender.

The unique specimen is in fragile condition, and has the surface rather worn, but has probably been clothed with a pale, fine, not very short pubescence.

BARYCHARA.

Corporis forma *Oligotæ* simillima, convexa, brevis, posterius acuminata. Antennæ filiformes, undecimarticulatæ. Coxæ intermediæ distantes; mesosternum carinatum. Tarsi breves.

The little insect for which this generic name is proposed appears to connect *Euryglossa* and *Saphoglossa* with *Oligota*, as it has quite the appearance of the latter genus; but it has the filiform eleven-jointed antennæ of the former, with which it is clear that its short tarsi (whose terminal joint shows not the slightest incrassation) will not allow it to be associated. It thus appears probable that it may prove to be the link required to connect the *Oligotæ* with the other Aleocharini having but four joints to all the feet. I regret I cannot completely expose the characters of this form, as the only individual of the minute species is in fragile condition, and its under surface and feet are clogged with gum-tragacanth. It does not appear to possess any special affinity with *Hypocyptus*, though its size, form, and general appearance suggest such.

1. **Barychara filicornis.** (Tab. VI. fig. 24.)

Convexa, posterius acuminata, nitida, parce punctata, picescens, pedibus fusco-testaceis; antennis flavis, elongatis, gracilibus, apicem versus haud crassioribus.

Long. $1\frac{3}{4}$ millim.

Hab. Guatemala, Zapote (*Champion*).

Antennæ pale yellow, not as long as head, thorax, and elytra, without the slightest differentiation of the terminal joints; each joint longer than broad; terminal joint as long as the two preceding together. Head rufescent, scarcely half so broad as the thorax, sparingly punctate. Thorax transverse, transversely convex, shining, scarcely punctate. Elytra rather longer than the thorax, sparingly punctate, with a very scanty but not short pubescence. Hind body short, attenuate behind, indistinctly punctate, but with rather elongate scanty pubescence.

Only a single specimen has been found.

OLIGOTA.

Oligota, Mannerheim, Brachel. p. 72 (1830); Erichson, Gen. et Sp. Staph. p. 179.
Microcera, Mannerheim, loc. cit.

This is a genus of wide distribution, containing about forty species of very minute Coleoptera. For the purposes of this work the genus is understood in the more extended sense given to it by Erichson, so that *Microcera* of Mannerheim and of Rey is included in it.

1. **Oligota centralis.**

Brevis, convexa, nigra, pedibus fuscis, anterioribus dilutioribus, antennis flavis; his brevibus crassis, clava majore; elytris abdomineque crebre punctatis.
Long. $\frac{7}{8}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ clear yellow, short and stout, with the three terminal joints forming a stout definite club. Thorax nearly impunctate, rather shining. Elytra rather longer than the thorax, like the hind body closely punctate.

So far as I can judge from a single specimen of this little atom, it is closely allied to the Chilian *O. pygmæa,* Sol., from which it is distinguished chiefly by its shorter and stouter antennæ; the elytra are also a trifle shorter.

2. **Oligota lævipennis.**

Lata, convexa, nigerrima, nitida, antennarum basi testacea; corpore sublævigato; antennis apicem versus crassioribus, articulo ultimo magno.
Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ yellow at the base, becoming gradually dark about the middle, slender till the seventh joint is reached; this only very slightly broader than the sixth, and the eighth and ninth each only slightly broader than its predecessor; tenth joint large and elongate, broader than the preceding joint and longer than the two preceding together. Palpi black. Head small. Thorax rather small, very black, shining and impunctate. Elytra longer than the thorax, shining black, with only a few indistinct punctures. Hind body obsoletely punctate; hind margin of the sixth segment conspicuously white. Legs black.

This is a very distinct species, comparatively broader than the European *O. granaria,* and with remarkably shining surface and comparatively small head. Only a single specimen has been found.

3. **Oligota polita.**

Minus lata et convexa, nigerrima, lævigata, nitida, abdominis apice fusco-rufo; antennis rufo-obscuris, brevibus, articulis tribus ultimis abrupte majoribus.
Long. circiter $\frac{3}{4}$ millim.

Hab. GUATEMALA, Senahu (*Champion*).

This species is a very distinct one, the upper surface being smooth with the exception of a few obsolete punctures on the elytra; and the club of the antennæ is remarkably abrupt, their seventh joint is small, while the eighth and ninth are strongly transverse; the terminal joint is about as broad as the ninth, and not elongate.

Only one individual, in very fragmentary condition, has been found.

4. **Oligota teres.**

Angustula, sat elongata, subparallela, dense punctata, haud nitida, nigricans, elytris fuscis, abdominis apice late flavo, antennarum basi pedibusque testaceis.

Long. $1\frac{1}{8}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ short, yellow at the base, becoming darker towards the extremity; third, fourth, and fifth joints small and slender; sixth and seventh also small, very short, transverse; eighth and ninth much broader, strongly transverse, of the same width as the terminal joint. Palpi infuscate yellow. Elytra evidently longer than the thorax, and paler in colour than it.

This species appears to be very closely allied to *O. parva*, Kr.; but the specimens are slightly larger and darker in the colour of the anterior parts, and the club of the antennæ is a little broader. Mr. Champion has found five specimens, quite similar to one another.

Group **DEINOPSINI.**

All the tarsi three-jointed.

This group will be at present limited to the single remarkable genus *Deinopsis*.

DEINOPSIS.

Deinopsis, Matthews, Ent. Mag. v. p. 193.

This peculiar genus has only a few species, viz. four in South America, two in North America, and one each in Australia, Ceylon, Japan, and Europe.

1. **Deinopsis ferruginea.** (Tab. VI. fig. 25.)

Ferruginea, abdomine paulo magis obscuro, antennis palpisque testaceis; lata, posterius acuminata, densissime subtilissimeque punctulata, opaca; prothorace basi utrinque sinuato, angulis posterioribus prolongatis, acutis.

Long. 3 millim.

Hab. GUATEMALA, Coatepeque 1300 feet (*Champion*).

Antennæ excessively slender, as long as the head and thorax. Head about half as broad as the thorax. Elytra about as long as the thorax, the hind angles of the latter prolonged backwards and closely clasping the shoulders. Hind body not elongate, red; the hind margins of the segments darker, and visibly crenulate.

Three individuals have been found.

2. Deinopsis angusta.

Fusca, antennis, palpis pedibusque testaceis; angustula, posterius acuminata; omnium densissime subtilissimeque punctata, subtiliterque pubescens, peropaca; prothorace basi utrinque subtruncato, angulis posterioribus parum prolongatis.

Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Coatepeque 1300 feet (*Champion*).

Antennæ excessively slender, quite as long as head and thorax. Head narrower than the thorax. This latter with the base only slightly sinuate on each side, about as long as the elytra. Hind margins of the abdominal segments rather inconspicuously crenulate.

Only a single individual has been found of this species, the most insignificant of the genus*.

Subfam. *CEPHALOPLECTINÆ.*

I am constrained to place as a separate subfamily a curious insect that presents somewhat the appearance of *Conosoma* or *Erchomus*, but which cannot be placed in the subfamily Tachyporinæ on account of the extraordinary structure of the head. It also presents other highly anomalous characters which will be gathered from the description of the generic characters, a description, however, which is made from a single decayed individual and is therefore very imperfect. The following points are amply sufficient to serve as characters to validate the subfamily :—

Caput in medio abrupte subtus inflexum, ore omnino in facie inferna corporis sito; antennæ occultæ; oculi nulli. Prosternum posterius in processu maximo productum.

CEPHALOPLECTUS.

Corpus depressum, posterius acuminatum, anterius rotundatum, caput vix conspicuum. Prosternum post coxas anteriores in processu maximo productum. Pedes breves, femoribus tibiisque laminato-dilatatis; tarsi breves, fere occulti.

This insect is the most anomalous of the Staphylinidæ yet discovered, and will be at once recognized by the fact that the prosternum is produced backwards over the anterior coxæ to form a large, broad process, similar to what exists in *Hydrocanthus* of the Dytiscidæ, except that it is even larger than in the genus of water-beetles I have mentioned. This is, however, only one of its peculiarities, for the condition of the head is even more remarkable; when the upper surface of the insect is examined, there seems to be no head, the large thorax, rounded in front, being apparently the most anterior part of the body; but a more careful inspection reveals that there is really an

* At the conclusion of the Central-American Aleocharinæ I will call attention to the description noted below; its modern genus cannot be identified, nor can we conclude with any certainty to what group of the Aleocharinæ the insect should be referred; and as Say's types are, I fear, not now in existence, it would appear that the description cannot be utilized.

Aleochara obscuricollis, Say, Tr. Am. Phil. Soc. iv. p. 468; Lec. Say's Am. Ent. ii. p. 585. *Hab.* Mexico.

emargination of the front of the thorax, into which is exactly fitted another piece of a transverse form, and this small piece (all that can be seen of the head from above) is the posterior part of the upper surface of the head. When the insect is viewed from beneath it is seen that the rest of the upper surface of the head is abruptly infolded, so that it forms part of the lower aspect of the body, the parts of the mouth being accordingly placed quite beneath the insect and even at some little distance from the front margin; the head, however, is quite as accurately adapted to the thorax on this aspect of the body as it is on the upper surface, so that, indeed, it appears actually to be a portion of the large thorax. The head, however, is capable of a slight extension from the thorax, and when this is accomplished there is exposed a large emargination on each side, so that two lateral projections are formed, and above these and concealed between them and the thorax are placed the short stout antennæ, of an uncertain number of joints. The mouth is entirely closed by the rather large labrum, which meets the front of the mentum, this latter being concealed, when the head is retracted, by the front of the prosternum: a large portion of the body of the maxilla is exposed, attached to which, and conspicuously exserted, is the slender and rather long maxillary palpus; the first visible joint of this palpus is small and oval; the second is slender, twice or three times as long as the first; the terminal joint small and slender, almost setiform. No trace of eyes can be detected either on the upper or under surface of the head. The portion of the prosternum displayed in front of the anterior coxæ is rather large, and the coxæ themselves are nearly globular and are rather widely separated by the extension backwards of the prosternum; this prolongation becomes broader behind the coxæ, and is prolonged far backwards, so as to project as far back as the hind margin of the pronotum; it is deeply emarginate behind, and reposes on the metasternum; the sides of the prosternum are completely folded in and closely applied to the upper face of the thorax. The mesosternum is large and is folded in the middle, so as to form a projection reposing on the upper face of the prosternal process, and joining behind a projection of the metasternum, which extends forwards under and between the rather widely separated middle coxæ. The hind coxæ are broadly separated, and form each a large lamina, rather larger than the metasternum, and extending outwards, becoming rather longer externally, to the epipleura; the other parts of the hind leg are concealed behind this lamina. Six ventral segments, all very mobile, are visible besides the genital armature. The sides of the wing-cases form a free edge, as in the more highly evoluted of the species of *Erchomus*. On the dorsal aspect there are visible four segments of the hind-body in addition to that of the armature, and at the base behind the margin of the wing-case the side piece of the preceding segment is displayed. There appears at first to be no margination of the sides of this part; but more careful inspection reveals that the margins are really extremely large, but that they are completely adpressed on the dorsal surface, so as to form actually a large addition to the superficies of the upper surface of the hind body.

On Tab. VII. fig. 1 A is an outline of the middle leg: 1 B is intended to give an idea of the underside of the head as seen when extended; in it α represents the buccal cavity closed by the labrum, β a portion of the maxilla bearing its palpus, γ such part of the antenna as can then be seen. The appearance of eyes in fig. 1 is illusory.

1. **Cephaloplectus godmani.** (Tab. VII. fig. 1.)

Depressus, latus, posterius acuminatus, ferrugineus; abdomine flavo-ferrugineo; dense pubescens, thorace elytrisque pallide cinereo-pubescentibus, setulisque erectis adspersis.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

Head scarcely visible, antennæ quite concealed. Thorax very large, its hind angles much produced backwards. Elytra not so long and scarcely so broad as the thorax, a little narrowed behind, the hind angles extremely obtuse; they have no visible punctuation, but an excessively fine transverse rugulosity, and in this respect resemble the thorax. The hind body is rather paler in colour than the anterior parts, and bears a concolorous, dense depressed pubescence.

The habits of this curious insect must remain for the present quite unknown. Mr. Champion found a single specimen in a track of the foraging ants (*Eciton*) in the dense virgin forest; but though he subsequently frequently watched the ants he could find no other example. From the condition of the specimen and the account Mr. Champion has given me of its discovery it is quite clear that it was dead at the time, and probably had been dropped by an ant who was carrying it off.

Subfam. *TACHYPORINÆ.*

HYPOCYPTUS.

Hypocyphtus, Mannerheim, Brachelytr. p. 58.
Hypocyptus, Erichson, Col. Mark Brand. i. p. 387; Gen. et. Spec. Staph. p. 214.

This is a genus of twenty or thirty species of very minute and obscure insects found in the European and North-American regions; it may, however, prove to be of wider distribution, as Kraatz has described a species from Ceylon.

1. **Hypocyptus debilis.**

Convexus, parce longius pubescens, fere impunctatus, nitidus, nigricans; prothoracis marginibus late flavis, abdominis segmentorum marginibus posterioribus, antennis pedibusque testaceis, elytris rufis.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

Antennæ moderately long, rather stout; third, fourth, and fifth joints more slender than the others, closely connected together, so that they are difficult to distinguish from

one another; the four following each a little broader than its predecessor, subequal in length, each longer than broad; tenth joint elongate, acuminate, nearly as long as the two preceding together. Palpi yellow. Head black. Thorax broadly yellow at the margins, the disk infuscate. Elytra red, longer than the thorax, finely and sparingly punctate, shining.

Two individuals have been found.

ERCHOMUS.

Erchomus, Motschoulsky, Bull. Mosc. 1858, iii. p. 218; Horn. Trans. Amer. Ent. Soc. vi. p. 107.
Tachinus fam. i. ex parte, Erichson, Gen. et Spec. Staph. p. 244.
Coproporus, Kraatz, Ins. Deutsch. ii. p. 399; Sharp, Trans. Ent. Soc. Lond. 1876, p. 81.
Cilea, pars, Fauvel, Ann. Mus. Gen. xii. p. 110.

This genus at present consists probably of some sixty or seventy described species distributed in the tropical parts of the world, where apparently they correspond to the *Tachini* of the boreal regions. The genus exhibits considerable variety of structure, and is rather sharply divided into two sections by the condition of the epipleuræ.

§ 1. *The epipleura, or inflexed margin of the wing-case, is but slightly developed in the vertical direction, the line limiting it internally being always quite free from the inner face of the wing-case.*

1. **Erchomus politulus.** (Tab. VII. fig. 2.)

Subdepressus, nitidissimus, niger; marginibus plus minusve picescentibus, antennarum basi pedibusque rufis, abdomine apicem versus flavescente; capite, thorace elytrisque lævigatis, abdomine parce subtiliter punctulato; prothorace basi truncato, angulis posterioribus rotundatis.
Long. $2\frac{3}{8}$ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cahabon in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*).—South America, Bahia (*coll. Sharp*).

This species is no doubt closely allied to *Tachinus humilis*, Er., which, however, is described as possessing punctuation on the elytra. In *E. politulus* the antennæ are rather short and stout, thickened towards the apex, with the four basal joints pale, the others black; joints 6–10 slightly transverse; the elytra are longitudinally impressed along the side, and the epipleuræ (seen beneath) have a somewhat prolonged edge, which, however, is small and obtuse in comparison with what exists in the more convex species.

Only a single individual is before me from each of the Mexican and Guatemalan regions; but numerous specimens have been found at Chontales, and I have many from Bahia. The one represented on the Plate is from Chontales.

2. **Erchomus debilis.**

Depressus, nitidissimus, piceus; marginibus dilutioribus, antennarum basi, pedibus elytrisque posterius rufis, abdomine apicem versus flavescente; capite, thorace elytrisque lævigatis; abdomine parce subtiliter punctulato; prothorace basi truncato, angulis posterioribus rotundatis.
Long. $2\frac{1}{8}$ millim.

Hab. Guatemala, El Reposo 800 feet (*Champion*).

Allied to *E. politulus*, but the individuals are smaller, more depressed, and of more dilute coloration, and with the emargination in the middle of the last ventral plate in the male much smaller; the antennæ are not quite so thick externally, but the penultimate joints are evidently transverse; the mesosternal carina is but slightly developed, being both short and little elevated. The resemblance to *E. distans* also is great, but the different punctuation of the hind body readily separates the two.

3. **Erchomus strigosus.**

Depressus, nitidus, rufo-testaceus; antennarum apice, elytris, pectore abdomineque (apice excepto) nigricantibus; thorace elytrisque impunctatis, abdomine parce obsolete punctato; prothorace basi truncato, angulis posterioribus rotundatis.
Long. $2\frac{1}{2}$ millim.

Hab. Mexico, Guajuco in Nuevo Leon, Saltillo in Coahuila (*Palmer*), Cordova (*Sallé*); Guatemala, San Gerónimo (*Champion*).

Antennæ slender, rather short, evidently thicker externally; ninth and tenth joints slightly transverse.

Although closely allied to *E. debilis*, this is readily distinguished by the bright colour of the head and thorax. When examined with a high magnifying-power, the elytra are seen to be covered with dense very fine transverse scratches, which exist also on the thorax, though not quite so conspicuously. The number of dark joints at the extremity of the antennæ varies in the few examples before me from one to four, and the amount of black with which the elytra are tinged is also apparently rather variable.

4. **Erchomus distans.** (Tab. VII. fig. 3.)

Coproporus distans, Sharp, Trans. Ent. Soc. Lond. 1876, p. 92[1].

Hab. Guatemala, San Gerónimo and Balheu in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*).—South America, Amazons[1], Bahia.

The figure is taken from a San-Gerónimo specimen; the coloration is more vivid than it is represented.

5. **Erchomus tachyporinus.** (Tab. VII. fig. 4.)

Parum convexus, nitidissimus, testaceus; elytris basi abdomineque segmento primo dorsali fuscis, antennis nigricantibus, basi et articulo ultimo testaceis; capite, thorace elytrisque lævigatis, abdomine crebrius obsolete punctato; prothorace basi fere truncato, angulis posterioribus rotundatis.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote, Senahu in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*).

Closely allied to *E. distans*, but distinguished by the more pallid colour and by the fact that the whole of the last joint of the antenna is pale; the punctuation of the hind body is not so dense and regular.

Three specimens have been found; the one represented is from Senahu.

6. **Erchomus truncatus.**

Depressus, nitidissimus, niger; antennis fuscis, basi pedibusque testaceis, abdomine apicem versus flavescente; capite, thorace elytrisque lævigatis, his ad apicem fere recte truncatis; prothorace basi truncato, angulis posterioribus fere rectis; abdomine parce obsoleteque punctulato.
Long. $2\frac{7}{8}$ millim.

Hab. GUATEMALA, Zapote, Cerro Zunil 4000 to 5000 feet (*Champion*); NICARAGUA, Grenada (*Sallé*).

Extremely similar to *E. politulus*, but readily distinguished by several characters of the antennæ, thorax, and elytra. The former are brownish in colour, with the two basal joints paler; joints 4–10 are each almost of one length, and about as long as broad. The thorax has no distinct emargination on each side of the base, but the hind angles are not broadly rounded, in fact depart but little from the rectangular form. The elytra are very little convex, and only finely impressed along the side in contact with the epipleural margin; the outer angle is only slightly obtuse, and the hind margin of the two wing-cases taken together appears nearly straight, being scarcely at all emarginate in the middle.

Two individuals were found at Zapote, and one in each of the other localities; these latter have the antennæ rather larger and darker in colour.

7. **Erchomus glabripennis.** (Tab. VII. fig. 5.)

Subconvexus, niger; pedibus testaceis, antennarum basi palpisque fusco-testaceis; prothorace versus latera picescente; capite, thorace elytrisque lævigatis, nitidissimis; abdomine subtilius sat crebre punctulato.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*).

Antennæ rather slender, scarcely thicker externally, black, with the two or three basal joints obscure yellow; the tenth joint about as long as broad. Thorax convex, very shining, entirely impunctate; the base slightly sinuate on each side; the hind angles scarcely at all prominent behind, very little rounded. Elytra deeply and rather broadly impressed along nearly the whole length of the lateral margin. Hind body finely but distinctly punctate, the segments at the base not at all rugose or strigose.

This is a peculiar species, having slender and elongate hind tarsi, and thus approaching to *Cilea*; but the margin of the epipleura is decidedly perpendicular; the hind tibiæ are

destitute of exserted setæ, and although the mesosternal carina is but little elevated, its anterior part shows a small prominent angle; the impression along the side of the wing-case, too, is peculiar, and causes the lateral margin to project further outwards than in any other species.

8. **Erchomus chontalensis.**

Latus, depressus, piceus; antennarum basi pedibusque testaceis; thorace elytrisque opalescentibus, nitidis, fere impunctatis; abdomine crebre subtiliter punctulato, parum nitido; elytris lateribus explanatis, angulo externo rotundato.

Long. 4 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ rather elongate; fifth and sixth joints each much longer than broad; tenth scarcely so long as broad; extremity of terminal joint pale. Base of thorax distinctly sinuate on each side, hind angles not prolonged, quite obtuse. Lateral margin of elytra explanate; thus no intramarginal impression appears to be present, the sides being curved towards the hind angle, which is broadly and completely rounded. Exserted setæ of hind body elongate.

This is a peculiar and very distinct species; the mesosternal carina between the middle coxæ is only very slightly elevated, but in front of it there is a distinctly rather more elevated prominent angle; the tarsi are elongate and slender; the tibiæ only feebly spinose. Only a single, very damaged example has been received.

9. **Erchomus affinis.**

Depressus, nigerrimus, nitidus; antennis fuscis, basi, palpis pedibusque testaceis; thorace parce subtiliterque punctulato, nitidissimo, basi utrinque leviter sinuato, angulis posterioribus leviter retrorsum spectantibus; elytris crebre subtiliter punctatis, secundum marginem lateralem canaliculatis; abdomine crebre subtiliter punctato.

Long. 3 lin.

Hab. GUATEMALA, Guatemala city (*Champion*).

This species is very similar to both *E. truncatus* and *E. segnis*, and its individuals are intermediate in their stature between those species; it is readily distinguished from the former by the more closely and distinctly punctate hind body and by the shape of the hind angles of the thorax, and from *E. segnis* by its smaller size, less punctate hind body, and rather shorter antennæ. It is almost equally near to the Amazonian *E. scutellatus*, but that species has the punctuation of the hind body much coarser.

One of the two individuals found has the elytra picescent, probably as the result of immaturity.

10. **Erchomus segnis.**

Depressus, nigerrimus, nitidus; antennis fuscis, basi, palpis pedibusque testaceis; antennis sat elongatis, articulis nullis transversis; thorace parce subtiliterque punctulato, nitidissimo, basi utrinque leviter sinuato, angulis

posterioribus vix retrorsum spectantibus ; elytris crebre subtiliter punctatis, secundum marginem lateralem canaliculatis ; abdomine crebrius punctato.

Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, Guatemala city, Capetillo, Cerro Zunil 4000 feet, Balheu and Purula in Vera Paz (*Champion*).

Antennæ scarcely thickened outwardly; joints 8–10 each about as long as broad. Extreme hind margin of elytra piceous; the sides of the elytra quite straight; the hind margin rounded at its junction with the sides, and thus forming a rounded, not an obtuse, angle. Hind body but little shining, not closely punctate; the two or three basal segments each finely reticulate-strigose at the base; the hind margins more or less piceous, that of the penultimate segment broadly so.

Three of the individuals from Cerro Zunil have the elytra rufescent or picescent, but this is not sufficient warrant for their separation.

11. **Erchomus dubius.**

Depressus, piceo-castaneus; antennarum basi, palpis pedibusque testaceis ; antennis sat elongatis, fere gracilibus, articulis nullis transversis ; thorace parce subtilissime punctulato, basi fere truncato ; elytris subtiliter punctulatis, vix ad marginem lateralem canaliculatis ; abdomine crebre subtiliter punctato.

Long. 3 millim.

Hab. GUATEMALA, Cahabon in Vera Paz (*Champion*).

Compared with *E. segnis*, the two individuals of this species are smaller and flatter, and have the hind tarsi markedly shorter, so that they are no doubt representative of a distinct species, even though the colour and other slight marks alluded to in the diagnosis should prove not to be constant characters. The only two specimens found are immature, and in a broken and fragile state.

12. **Erchomus sinuatus.** (Tab. VII. fig. 6.)

Depressus, niger, nitidus ; elytris rufescentibus vel picescentibus, antennarum basi, palpis pedibusque testaceis ; thorace elytrisque crebre sat subtiliter punctatis, his ad marginem lateralem canaliculatis, angulo externo sinuato.

Long. 5 millim.

Hab. NICARAGUA, Grenada (*Sallé*), Chontales (*Janson*) ; PANAMA, Bugaba, 800 to 1500 feet (*Champion*).—SOUTH AMERICA, Venezuela, Colombia.

The individuals of this species are larger than those of the allied species, and are readily distinguished, inasmuch as the hind margin at the outer angle is slightly sinuate instead of being obtuse or rounded as in other species; the mesosternal carina is not much elevated, but presents near its anterior part a prominent, free, small angle. The second joint of the antenna is a little longer than the third ; the tenth hardly so long as broad; the terminal joint elongate, dark, its acuminate extremity pale. The base of the thorax is but little sinuate on each side, and the hind angles are not prolonged

backwards, and are obtuse and slightly rounded; the surface has a fine quite distinct punctuation, and the colour becomes near the hind angles picescent. The rather broad hind body has very distinct lateral margins, and the punctuation at the extreme base of the basal segment is rather coarse.

Only a few individuals have been found, and the figure has been drawn from a specimen found at Bugaba. The species was extant in Guérin-Ménéville's collection under the name of *Tachinus depressus*, Er.; but I cannot consider it to accord sufficiently with Erichson's description, and suppose the French savant was mistaken in his determination.

13. **Erchomus apicicornis.**

Subdepressus, nitidus, niger; thorace elytrisque piceo-fuscis, antennarum basi et articulis duobus ultimis, palpis pedibusque testaceis; prothorace impunctato, nitido, basi fere truncato, lateribus ad angulos posteriores fortiter rotundatis; elytris æqualibus, parce obsolete punctatis; abdomine subnitido, parce obsoleteque punctato.

Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*).

A peculiar and readily recognized species of rather flat form and only feebly punctate surface, with the terminal two joints of the antennæ abruptly paler than the others; the elytra without lateral depression or channel, with the perpendicular portion of the epipleuræ small and the mesosternal carina feeble, without angular elevation in front; the hind legs are rather slender and elongate, so that the species makes a decided approach to the genus *Cilea*.

14. **Erchomus ruficornis.**

Tachinus ruficornis, E. Dugès in coll. Sallé.

Parum convexus, nitidus, niger; antennis rufo-obscuris, basi pedibusque testaceis; prothorace parce, omnium subtilissime punctato; elytris crebre subtiliter punctatis, lateribus haud curvatis; abdomine minus nitido, subtiliter parum crebre punctato; mesosterno alte carinato.

Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Guanajuato (*Dugès, coll. Sallé*).

Antennæ slightly thickened outwardly; second and third joints equal; tenth about as long as broad. Thorax with the base almost straight, the hind angles not produced backwards, rounded. Elytra not impressed along the outer margin, which is straight and not curved, so that though the hind margin is a little oblique externally, the outer angle is only a little obtuse, not rounded.

This species effects a transition to the following group, the epipleuræ being more vertical than in the other species of the group; it is readily distinguished from the species resembling it in size and form by the great elevation of the mesosternal carina. Four individuals are before me.

§ 2. *Epipleura largely developed, perpendicular, being inflexed and applied to the inner face of the elytra, so that the line limiting it internally stands out even at the base but little from the inner face of the wing-case.*

15. **Erchomus rutilus.**

Tachinus rutilus, Er. Gen. et Spec. Staph. p. 273 [1].

Hab. MEXICO, Cordova (*Sallé*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Guatemala city and San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*).—ANTILLES, Porto Rico [1], St. Thomas [1]; SOUTH AMERICA, Colombia [1], Bahia (*Castelnau*).

16. **Erchomus cinctiventris.**

Sat convexus, nitidissimus, niger; antennis rufis, basi pedibusque testaceis, prothoracis marginibus, elytrorum abdominisque segmentorum marginibus dilute piceis; thorace elytrisque lævigatis, abdomine parce profunde punctato.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Guatemala city (*Champion*).

Very shining, black, with the thorax piceous; the lateral and posterior margins of the elytra more or less dilute in colour, and the terminal portions of the rings of the hind body very distinctly rufo-piceous. The antennæ are rather short, the three basal joints yellow, the others obscure red, the two or three penultimate joints not quite so long as broad. Thorax large, quite impunctate, the base slightly sinuate on each side; the hind angles rounded, not produced backwards. Elytra almost impunctate, with an obscure depression near the side behind; the outer hind angles obtuse, scarcely rounded. Hind body shining, with a good many rather coarse and deep punctures on each segment, not extending, however, to the hind margin. Legs short. Mesosternal carina only slight, and without anterior elevation.

A large series, showing scarcely any variation except in the more or less dilute piceous colour of certain parts, has been found of this species; it and *E. vicinus* appear to be rather closely allied to the Amazonian *E. inclusus*. A North-American insect, probably *E. lævis*, Lec., is extremely similar to the two Central-American species, but differs from both by the punctuation of the hind body.

17. **Erchomus lævis.**

Coproporus lævis, Lec. New Sp. Col. i. 1863, p. 31 [1].

Erchomus lævis, Horn, Trans. Am. Ent. Soc. 1877, p. 108 [2].

Hab. NORTH AMERICA, Southern States [1], Gulf States [2].—MEXICO, Cordova (*Sallé*).

A single individual from Sallé's collection may apparently be referred to this species, though the head and thorax are rufescent in colour, the latter being, however, piceous on the disk.

18. **Erchomus vicinus.**

Sat convexus, nitidissimus, niger; antennis rufis, basi pedibusque testaceis, prothorace picescente, elytrorum abdominisque segmentorum marginibus minus argute piceis; thorace lævigato, elytris parce subtilissime punctulatis; abdomine æqualiter obsolete punctato, minus nitido.
Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, Guatemala city, Zapote, San Gerónimo (*Champion*).

This insect is very similar to *E. cinctiventris*, but differs in the longer antennæ and the different punctuation of the hind body. The antennæ are slender, but little thickened externally, and no one of the joints is broader than long. The base of the thorax is distinctly sinuate on each side, so that the rounded hind angles appear a little produced backwards. The margins of the segments of the hind body are not very conspicuously piceous.

19. **Erchomus ignavus.** (Tab. VII. fig. 7.)

Coproporus ignavus, Sharp, Trans. Ent. Soc. Lond. 1876, p. 87[1].

Hab. MEXICO (*Truqui*), Cordova (*Sallé*); GUATEMALA, Guatemala city, San Gerónimo, Las Mercedes 3000 feet, El Tumbador, Balheu in Vera Paz, Capetillo, Zapote, Aceituno (*Champion*); PANAMA, Volcan de Chiriqui 3000 to 4000 feet, Bugaba 800 to 1500 feet (*Champion*).—SOUTH AMERICA, Amazons valley[1].

This species varies a little in size and colour, and the terminal joint of the antennæ is sometimes nearly black, sometimes nearly entirely pale. The mesosternal carina is rather strongly elevated, but there is no trace of a tubercle on the middle of the front edge of the mesosternum. *Tachinus elatus*, Er. (Gen. et Spec. Staph. p. 248), is probably a similar species with longer and more slender antennæ.

The individual figured was found by Truqui in Mexico.

20. **Erchomus flavipalpis.**

Convexus, nitidus, piceus; capite elytrisque nigricantibus, antennarum basi, pedibus palpisque testaceis; antennis tenuioribus, apicem versus leviter incrassatis, articulo ultimo apice pallido; prothorace impunctato, angulis posterioribus paululum retrorsum productis, rotundatis; elytris parce subtiliter punctatis, angulo externo late rotundato; abdomine crebre punctato.
Long. 5 millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Paraiso 300 feet (*Champion*); PANAMA, David (*Champion*).

Each joint of the antenna is longer than broad. The large and ample thorax is without punctuation, and is excessively finely strigose. The punctuation of the wing-cases is quite distinct though fine; the lateral margin is curved near the hind angle, so that the hind angles appear very broadly rounded; there is no lateral depression. The mesosternal carina is large; it terminates in front as a free angle, and just in front of this angle the anterior edge of the mesosternum is tuberculate. The terminal ventral

plate of the female is armed with four long spines and an extremely short tooth on each side.

Ten individuals have been found. The species is very closely allied to the Amazonian *E. rotundatus*, but that species has the hind angles of the thorax more prolonged backwards, and the antennæ a little longer.

21. **Erchomus ventralis.**

Convexus, nitidus, piceus; capite elytrisque nigricantibus, antennarum basi, pedibus palpisque testaceis; antennis tenuioribus, apicem versus leviter incrassatis; prothorace impunctato, basi utrinque leviter sinuato, angulis posterioribus haud retrorsum productis; elytris parce subtiliter punctatis, angulo externo late rotundato; abdomine crebre punctato.
Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

Very closely allied to *E. flavipalpis*, but with the thorax less sinuate on each side, and the hind angle less prolonged; the antennæ are a little longer, and the spines of the last ventral plate of the female are longer; the lateral tooth especially is longer. The mesosternal carina is very large, but is rounded at its upper anterior termination.

Only two individuals have been found.

22. **Erchomus gravidus.** (Tab. VII. fig. 8.)

Convexus, nitidus, niger; antennis piceis, basi dilutiore, pedibus piceo-rufis; prothorace impunctato, basi utrinque leviter sinuato, angulis posterioribus haud retrorsum productis; elytris parce subtilissime punctatis, angulo externo late rotundato; abdomine dense punctato.
Long. 6 millim.

Hab. MEXICO, Las Vigas (*Flohr*), Cordova (*Sallé*); PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Very closely allied to *E. flavipalpis*, but larger and darker in colour, and with the elytra more finely punctate, the base of the thorax less sinuate on each side. The mesosternal carina is very large. It is still more similar to the Brazilian *E. convexus*, Er., but that species has the hind angles of the thorax more produced.

The figure is drawn from one of the Panama exponents.

23. **Erchomus impressus.**

Convexus, nigro-piceus, nitidissimus; antennis, palpis pedibusque rufis, abdomine piceo; prothorace amplo, basi utrinque leviter sinuato, angulis posterioribus vix retrorsum productis; elytris parcissime obsolete punctatis, intra latera impressis, angulo externo late rotundato; abdomine parce punctato.
Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ slender, a little thicker externally, reddish; the three or four terminal joints a little infuscate; tenth joint quite as long as broad. Thorax extremely shining, without any punctuation or transverse strigosity. Elytra very shining, their surface a

little uneven, but only sparingly and indistinctly punctate; they are broadly but vaguely depressed near the side, and the external angle is broadly rounded. The hind body is only sparingly and indefinitely punctate.

This insect is rather narrower than *E. flavipalpis*, and is readily distinguished by the very shining thorax and elytra, and the depression near the side of the latter; the mesosternal carina is large and presents at its upper anterior termination a free angle, and the middle of the front edge of the mesosternum is tuberculate. Only three individuals have been found.

24. **Erchomus mollis.**

Minus latus, convexus, niger, nitidus, subtus piceus; antennis, pedibus partibusque oris testaceis, illis brevibus, articulis 4°–10^{m} transversis; capite, thorace elytrisque nitidissimis fere impunctatis; abdomine minus nitido, parce subtilissime punctulato.

Long. 3 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ short and stout; third joint small, only half as long as the second joint; of the following joints each is broader than its predecessor, so that the penultimate joints are strongly transverse; the terminal joint is elongate, longer than the two preceding together. Head very short. Thorax with the base not sinuate; the hind angles rounded, but not largely so. Elytra flat at the sides, but not impressed; the hind angle but little rounded. Hind body not so pointed behind as in many other species; the terminal segments picescent or rufescent; the terminal segment almost destitute of teeth.

This is a very aberrant species; the middle coxæ are very approximate, and there is only a very fine and obscure raised line between them; the metasternum is very short, the internal laminæ of the posterior coxæ very small, the tarsi slender and rather short; the epipleuræ are very largely developed, quite folded in, so that the free trenchant sides of the elytra are very conspicuous when the underside of the insect is inspected.

Five individuals have been found; they are in very decayed and fragmentary condition.

TACHINODERUS.

Tachinoderus, Motschoulsky, Bull. Mosc. 1858, iii. p. 217; Fauvel, Ann. Mus. Gen. xii. p. 276.
Tachinomorphus, Kraatz, Wiegm. Arch. 1859, i. p. 54.

This genus approaches very closely to *Erchomus* by means of the more depressed species of that genus, such as *E. segnis* and *E. sinuatus*; but still *Tachinoderus* has, even compared with these *Erchomi*, the epipleuræ less metamorphosed from the *Tachinus*-form, and as the maxillary palpi are more largely developed, and the *Tachinomorphi* are larger insects, the genus may still be retained. *Tachinoderus* seems

essentially a genus characteristic of Austro-Malasia and Eastern India, out of which region I am acquainted only with the two species here ascribed to the genus.

1. **Tachinoderus grandis.** (Tab. VII. fig. 9.)

Coproporus grandis, Solsky, Hor. Soc. Ent. Ross. v. p. 121[1].

Hab. Mexico [1], Jalapa, Mirador (*Höge*), Guanajuato, Cordova, Yolos, Cuernavaca, Puebla, Capulalpam (*Sallé*); Guatemala, Guatemala city, Capetillo, Las Mercedes 3000 feet, Cerro Zunil 4000 to 5000 feet, Senahu and Sabo in Vera Paz (*Champion*).

The figure is drawn from examples found at Senahu.

2. **Tachinoderus major.**

Major, subdepressus, sat nitidus, nigerrimus; abdomine ad apicem piceo; prothorace nitido, fere impunctato, subtilissime transversim striguloso, basi utrinque subsinuato, angulis posterioribus subacutis; elytris parce subtiliter punctatis, subtilissimeque transversim strigulosis, epipleuris evidenter breviter setulosis; abdomine crebrius minus subtiliter punctato, lateribus minus obsolete marginatis; pedibus cum tarsis nigris.

Long. 9 millim.

Mas, tarsis anterioribus leviter dilatatis; segmento ultimo dorsali æqualiter quadrispinoso, spinis intermediis minus separatis; segmento ultimo ventrali etiam quadrispinoso, spinis intermediis latioribus et paulo longioribus, ab incisura magna, elongata, sat lata separatis; segmento penultimo margine posteriore trisinuato, sinu intermedio ciliato.

Fem., segmento ultimo dorsali quadrispinoso, spinis intermediis paulo brevioribus, apicibus tenuibus sat late distantibus; segmento ultimo ventrali sexspinoso, spinis quatuor intermediis fere æqualibus, lateralibus evidenter brevioribus.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

This species is closely allied to *T. grandis*, but the anterior portion of the mesosternal carina is evidently more prominent; the hind body is reddish at the extremity, the punctuation of the elytra is more distinct, that of the hind body rather coarser and less dense; the male anterior tarsi are more dilated, and the sexual structures of the terminal segment are a little different.

Three individuals only have been found, and the one female is quite fragmentary.

CILEA.

Cilea, Duval, Gen. Col. Eur. Staph. p. 25.
Leucoparyphus, Kraatz, Nat. Ins. Deutsch. ii. p. 393.
Cilea (ex parte), Fauvel, Ann. Mus. Gen. xii. p. 278.

This genus has been merged with *Erchomus* by Fauvel, but it may be retained; the epipleuræ are normal, the tarsi more elongate, the hind body strongly margined at the sides, and the mesosternum very feebly carinate; various species of *Erchomus* approach *Cilea* in one or perhaps two of these respects, but none that I am acquainted with in such a manner as to be intermediate. Discrepancy of opinion exists as to whether *Cilea* or *Leucoparyphus* should be used for the name of the genus, the two names having apparently been published simultaneously; Duval (*op. cit.* p. 63, note) states definitely

that the name he proposed has priority, and I accept this declaration till evidence to the contrary shall be produced. Although only four or five species are known, the genus has a very wide distribution, occurring in Europe, Madagascar, Caffraria, and Ceylon. The species found in Europe also occurs in North America, and Mr. Champion's discovery of a species in Guatemala is the first indication we have obtained of the genus being really endemic in the western hemisphere.

1. **Cilea fenestrata.**

Subdepressa, nitida, lævigata, nigra; elytris pone scutellum plagis duabus testaceis, pedibus (antennisque?) fuscis; abdomine ad apicem longius nigro-setoso.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Three basal joints of antennæ fuscous yellow; the fourth joint darker; the others broken off. Thorax large, rather broader than the elytra, rounded at the sides, so that the hind angles are obtuse; base not at all sinuate. Elytra with smooth and polished surface, like the thorax entirely without punctuation, straight at the sides, but the hind margin externally much sloped, so that the exterior hind angles are very obtuse. Hind body strongly margined at the sides, quite black, shining, with only a few very fine punctures.

The only individual found is in a very broken and decayed condition; it is a female, and is remarkable for the great length of the terminal spines of the last segment; the same segment is also ornamented with very long and conspicuous black setæ.

TACHINUS.

Tachinus (ex parte), Gravenhorst, Micr. i. p. 135.
Tachinus (fam. II.), Erichson, Gen. et Sp. Staph. p. 253.

This is a genus of sixty or seventy species, and is one of the characteristic features of the Staphylinid fauna of the boreal and temperate portions of the Palæarctic and Nearctic Regions; it is largely represented in North America. The four species here described are of feeble development; they indicate a greater extension of the genus to the south in the northern part of the western hemisphere than has been hitherto recorded, but in the Old World a similar feeble species has been found at a great elevation in the Pamir. A species reputed to belong to the genus has been described from Chili, and it is possible that others may be discovered at great elevations in the more northern portions of South America.

1. **Tachinus meridionalis.** (Tab. VII. fig. 10.)

Debilis, subdepressus, nitidus, niger; prothoracis marginibus lateralibus flavescentibus, elytris fusco-testaceis, circa scutellum et ad margines nigricantibus; pedibus flavis, tibiis tarsisque fusco-testaceis.
Long. $4\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ elongate; the tenth joint as long as broad, blackish, with the basal joint infuscate yellow. Thorax very finely rather closely punctate; elytra more coarsely, very distinctly punctate.

The species is readily distinguished from the others here described by the more distinct punctuation and more pallid colour of the wing-cases.

In the male the terminal ventral plate ends in two broad laciniæ, separated by an elongate fissure, the anterior portion of which is narrow; there is a lateral tooth of moderate length on each side, but not extending so far back as do the central laciniæ; the penultimate plate has a rather deep rounded emargination, the edge of which is excessively obscurely asperate. The dorsal plate resembles that of *T. alticola*, but the lateral teeth are more elongate; the front tarsi in this sex are only just perceptibly broader than they are in the female. In the female the last dorsal plate terminates in four rather long spines; they all extend equally far back and are equidistant, the two middle ones being the more slender; the last ventral plate is six-spinose, the outer tooth on each side being rather the longer, though it does not extend so far back as the others.

Only two specimens have been found.

2. **Tachinus inornatus.** (Tab. VII. fig. 11.)

Subdepressus, nigricans, nitidus; prothoracis marginibus basali et lateralibus flavescentibus; elytris rufo-obscuris, abdomine picescente, segmentorum marginibus pallidioribus; antennarum basi fusca, pedibus fusco-testaceis; prothorace fere impunctato, subtiliter striguloso, elytris parce obsoleteque punctulatis.

Long. $5\frac{1}{2}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Antennæ elongate, even the tenth joint longer than broad; they are black with the two basal joints very obscure red. The thorax is destitute of punctuation, but it is rendered less shining by a dense fine strigulosity. The punctuation of the elytra is not only scanty, but very indistinct.

Two females have been found; the last dorsal plate ends in four equally long spines, the outer of which are broad, and the inner not extremely slender; the last ventral plate is six-spinose, the outer spine being rather longer than the others, though it does not project nearly so far back.

3. **Tachinus alticola.**

Subdepressus, angustulus, nitidus, nigricans; prothoracis marginibus lateralibus flavescentibus; elytris lateraliter versus humeros brunescentibus, pedibus flavis, tibiis tarsisque fuscis.

Long. 6 millim.

Hab. Guatemala, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ elongate, entirely black; tenth joint as long as broad. Palpi black. Thorax rather closely and finely punctate, very shining. Elytra rather more coarsely

punctured than the thorax. Hind body closely and finely punctate, but little shining; legs slender.

In the male the laciniæ of the last ventral plate are rather elongate, and are separated by a broad space, which is continued forwards as an elongate narrow fissure, the lateral margins of this fissure being slightly raised; the penultimate ventral plate has a broad, shallow, sinuous emargination in the middle, and this portion of the hind margin is rough or file-like, with very minute asperities. The last dorsal forms in the middle a prominence, which is divided behind by an angular notch, so that it forms two short broad teeth at the extremity; and each outside angle of the plate is slightly produced so as to form a very short tooth, which does not extend so far back as the base of the central notch.

Only a single individual has been found.

4. **Tachinus nimborum.**

Subdepressus, angustulus, nitidus, nigricans; prothoracis marginibus basali et laterali anguste picescentibus; elytris puncto humerali piceo, antennarum basi pedibusque rufis; pedibus fusco-testaceis.
Long. 5 millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ elongate; the tenth joint about as long as broad; the two basal joints obscure red. Thorax with a distant and fine punctuation. Elytra rather more coarsely and distinctly punctured.

Only a single female has been found; though extremely similar to *T. alticola*, the colour is rather darker, except that the basal joints of the antennæ are paler; hence it is probable that it is a distinct species, although only a female of *T. nimborum* and a male of *T. alticola* have been found. The structure of the terminal segment is similar to that of the corresponding sex of *T. inornatus*, except that the spines of the ventral and dorsal plates are not quite so elongate.

TACHYPORUS.

Tachyporus, Gravenhorst, Mon. Staph. p. 1; Erichson, Gen. et Spec. Staph. p. 231.

This genus, of about forty or fifty species, is confined to the northern and north-temperate regions of the two hemispheres, where the species are evenly distributed. It is well known that the species of the genus are characterized only by very feeble external characters, and the Central-American forms are no exception in this respect to what has been observed elsewhere.

1. **Tachyporus mexicanus.** (Tab. VII. fig. 12.)

Niger, nitidus; antennis pedibusque testaceis, illis extrorsum fuscescentibus; prothorace elytrisque testaceis, illo plaga magna picea, his sutura et ad latera anterius nigro signatis, abdominis segmentis posterius late rufo-cingulatis.
Long. $4\frac{1}{2}$ millim.

Hab. Mexico, Saltillo in Coahuila (*Palmer*).

The antennæ are slender, with the tenth joint slightly longer than broad; the five or six basal joints yellow, the rest slightly infuscate. The thorax is yellow, with a large pitchy mark in front extending nearly to the base. The suture of the elytra in front is infuscate, and there is a well-marked black line extending from the shoulder more than halfway to the hind margin.

The species is very similar to *T. chrysomelinus*, but the individuals are smaller, with feebler antennæ, largely infuscate disk to the thorax, and the front tarsi of the male only very slightly dilated.

2. **Tachyporus pectoralis.**

Testaceus; capite superne, pectore abdominisque segmentorum partibus anterioribus fuscis, elytris rufo-testaceis.
Long. 4 millim.
Var. capite prothoraceque testaceis.

Hab. Guatemala, Quezaltenango 7800 feet (*Champion*).

Antennæ testaceous, rather slender, evidently thicker externally. Elytra very sparingly punctured, scarcely darker about the scutellum. Hind body with the basal portions of the three or four anterior segments dark in colour; the terminal segment also darker.

I have seen only two individuals; the more pallid colour of one of them may be due to immaturity. The male anterior tarsi are only slightly dilated.

3. **Tachyporus pallescens.**

Debilis, testaceus; capite superne pectoreque fuscis; prothorace antrorsum minus angustato, elytris parcius punctatis.
Long. $3\frac{3}{4}$ millim.

Hab. Guatemala, Guatemala city, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ not elongate, evidently thicker externally; ninth and tenth joints scarcely so long as broad. Elytra less punctate than usual. Hind body entirely yellow.

Two individuals from each locality are before me; those from the Quiche Mountains are slightly larger, and have a slight cloud of dark colour on the middle of the thorax. The anterior tarsi of the male are scarcely dilated.

4. **Tachyporus argutus.** (Tab. VII. fig. 13.)

Niger; antennis, pedibus, prothoracis lateribus et basi elytrorum posterius testaceis, abdominis segmentis basalibus testaceo-marginatis.
Long. 4 millim.

Hab. Guatemala, Dueñas (*Champion*).

Antennæ entirely testaceous; ninth and tenth joints rather longer than broad.

Thorax black, with a sharply defined border of yellow at the side and base, this border being broadest at the hind angles. Elytra black, behind with a waved margin of yellow colour; this is broad at the outer margin, just within this still a little broader, then becomes narrower towards the suture.

CONOSOMA.

Conosoma, Kraatz, Ins. Deutsch. ii. p. 431; Horn, Tr. Am. Ent. Soc. vi. p. 108.
Conurus, Steph. Ill. Brit. Ent. v. p. 188; Er. Gen. et Spec. Staph. p. 218.

This genus is of almost cosmopolitan distribution, and will no doubt prove to be very rich in species; at present about seventy species pertaining to it are described. The name *Conurus* has priority; but as it is in use in ornithology, it should give place to *Conosoma*.

1. **Conosoma gravidum.** (Tab. VII. fig. 14.)

Latius, convexum, ferrugineum; capite, thorace, elytris antennisque fuscis, his articulis quatuor basalibus pedibusque testaceis; thorace elytrisque minus dense punctatis, his ad basin ferrugineis ibidemque aureo-setulosis; abdomine aureo-setuloso, setis exsertis haud elongatis.
Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ rather short, much thickened towards the extremity, so that the tenth joint is rather strongly transverse; extremity of the terminal joint yellow. Thorax dark in colour, more or less red at the sides and hind angles, the latter rounded. Hind body ferruginous, fifth and sixth segments black at the base, seventh dark behind; it is closely punctate. Mesosternum distinctly carinate; the posterior division of the carina short, coarsely punctate.

This species is allied to *C. latum* from the Amazons, but differs in numerous details of the coloration and clothing of the surface. Only two individuals have been found.

2. **Conosoma plebeium.**

Elongatum, subopacum, dense punctatum, fuscum; antennarum basi pedibusque testaceis; antennis gracilibus articulis nullis transversis; prothorace elongato, basi utrinque sinuato, angulis posterioribus rectis, vix minute rotundatis.
Long. 6 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ elongate and slender; tenth joint a good deal longer than broad; terminal joint a little longer than the tenth, pale at the apex; the two or three basal joints yellow, the others more or less deeply infuscate yellow. Thorax elongate, the hind angles distinctly produced backwards; the surface very finely punctate and pubescent. The elytra though elongate are scarcely longer than the thorax; they are densely

punctate, and indistinctly marked with red near the shoulder. The legs are slender and long. The mesosternum is distinctly carinate, the posterior portion of the carina elongate.

Only one individual has been found. The species is very similar to the well-known *C. pubescens*, but the insect is larger, and has considerably longer and more slender antennæ.

3. **Conosoma mediale.**

Gracile, nigro-fuscum, dense subtilissime punctatum, opacum; antennis fuscis, basi pedibusque testaceis, abdominis segmentis ferrugineo-cingulatis; prothorace elongato, basi fere truncato, angulis posterioribus rectis haud rotundatis.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, Zapote (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ moderately long, a good deal thickened externally; the two basal joints yellow, the others darker, the apex again a little paler; tenth joint just about as long as broad. Thorax elongate, with the base only very slightly sinuate, so that the hind angles project scarcely at all backwards. Elytra about as long as the thorax. Hind body slender, the posterior portions of the segments reddish. The mesosternal carina is moderately elevated.

This obscure insect appears closely allied to *C. pubescens*, but is of darker colour, and is rather smaller, and the hind angles of the thorax project a little more backwards. Only one individual has been found in each locality: the one from Zapote is very immature so as to be nearly brown in colour; the second, from Panama, has the antennæ slightly longer and more slender than the type from Guatemala.

4. **Conosoma parcum.**

Angustulum, minus dense punctatum et minus tenuiter pubescens, fusco-ferrugineum; antennis pedibusque testaceis, illis extrorsum fuscescentibus; elytris ad basin vage rufescentibus.

Long. 5 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, San Gerónimo (*Champion*).

Antennæ a little thickened externally; tenth joint about as long as broad. Thorax elongate, truncate at the base, with the angles not projecting backwards, the surface only sparingly punctate, and the pubescence less delicate than usual. Elytra elongate, longer than the thorax, vaguely reddish at the base, less densely punctured and less delicately pubescent than usual. Mesosternal carina in front very slight, behind slight, but quite definite and punctate.

Three individuals have been found.

5. **Conosoma ornatum.** (Tab. VII. fig. 15.)

Ferrugineum; antennis fuscis, basi pedibusque testaceis, capite thoraceque in medio fuscescentibus, elytris nigris, fascia irregulare basali rufa, abdomine variegato; thorace parce punctato, basi truncato, angulis posterioribus subobtusis.
Long. 4 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, Guatemala city, Capetillo (*Champion*); PANAMA, Los Remedios (*Champion*).

Rather slender; antennæ moderately long, much thickened outwards, dark in colour, with the basal joints pale, the two or three penultimate joints not so long as broad; the terminal joint large. Head more or less infuscate, usually paler in front. Thorax about as long as broad, but little rounded at the sides, moderately narrowed in front; the base not sinuate till quite close to the hind angles, these being very minutely prolonged backwards, and not rounded; the sides are broadly pale, the middle dark, the surface rather sparingly punctate. Elytra evidently longer than the thorax, rather more closely punctate than it, black with a broad irregular basal pale fascia. Hind body slender, red, more or less marked with black. Mesosternal carina slightly elevated behind, almost wanting in front.

The small series of individuals of this species show some variation. Seven individuals from Guatemala agree closely except that the breast is either blackish or red, probably dependent on maturity, and that the infuscation of the thorax and segments of the hind body is variable in degree: an eighth individual, from Capetillo, has the antennæ paler and more slender, and the variegation of the elytra much less distinct, while the pair from Panama have the antennæ rather more slender and the terminal joint quite pale. The individual delineated on the Plate is from Cerro Zunil.

6. **Conosoma subornatum.**

Fusco-ferrugineum; antennarum basi pedibusque testaceis, elytris ad basin minus argute rufo-maculatis; crebrius punctatum; antennis articulo penultimo haud transverso.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo, Guatemala city, Zapote, Aceituno, Purula, San Isidro 1600 feet (*Champion*); NICARAGUA, Chontales (*Janson*).

Antennæ rather slender; the tenth joint about as long as broad; terminal joint a little paler towards the extremity. Thorax with the base only indistinctly sinuate on each side, the hind angles scarcely projecting backwards, minutely rounded; it is of fuscous colour, more or less vaguely ferruginous about the sides. Elytra only as long as the thorax, with a large vague transverse red mark at the base, not extending to the outer margin. Hind body fuscous, with each segment ferruginous behind. Mesosternal carina only slightly prominent.

The unique individual from Nicaragua is very pallid and immature, and it is not quite clear that it is really conspecific with the Guatemalan specimens.

7. **Conosoma diffine.**

Haud elongatum, nigro-fuscum; antennis pedibusque fuscis, illis basi et apice testaceis; prothorace basi truncato, haud breviore quam elytra.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ not elongate, the penultimate joint about as long as broad. Thorax much narrowed in front, very finely punctate. Elytra not longer than the thorax. Mesosternal carina only slightly elevated.

The three individuals found of this species are in very bad condition, and are very similar to the *C. fusculum* of Europe.

BOLITOBIUS.

Bolitobius, Mannerheim, Brach. p. 18 (1830); Steph. Ill. Brit. Ent. v. p. 171 (1832).
Lordithon, Thomson, Sk. Col. iii. p. 171.

This genus is moderately numerous in species (probably about fifty are known), and occurs throughout the northern and temperate regions of the northern hemisphere. A species from Rio de Janeiro has been ascribed to the genus, as well as another from the Antilles, and there is also a record of a species in Ceylon. The Colombian *B. seriatus,* Er., should probably be assigned to *Megacronus,* which genus Erichson did not distinguish from *Bolitobius.* Two of the Central-American species are of the most ordinary form of the genus, but the third, *B. festivus,* will probably be entitled to form a distinct genus.

1. **Bolitobius festivus.** (Tab. VII. fig. 16.)

Nitidus, rufo-testaceus; antennarum articulis 5°–11^{m}, elytrorum apice abdomineque nigris, hoc apice testaceo; corpore anterius fere lævigato, abdomine parce, segmento 5° densius, punctato.
Long. 9 millim.

Hab. GUATEMALA, Zapote (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Head broad and short (for a *Bolitobius*); antennæ with the penultimate joints rather shorter than broad. Thorax about as long as broad. Elytra longer than the thorax, very polished, along the suture with a series of five or six fine setigerous punctures, with a discoidal series of three or four distant, obsolete punctures, and with a marginal series of more crowded punctures. Hind body intense black; the hind margin of the fifth and the whole of the sixth and seventh segments yellow; the fifth segment is much more punctate than the others, and densely armed with setæ and pubescence.

The individual drawn is from Panama: the artist has represented the species as much more slender than it really is; it should, indeed, be considerably broader than *B. obliquus.*

2. **Bolitobius obliquus.** (Tab. VII. fig. 17.)

Gracilis, niger, nitidus; antennarum tibiarumque basibus elytrisque testaceis, his plaga scutellari elongata maculaque magna versus angulum posteriorem nigris, tarsis sordide testaceis; abdomine versus apicem fortiter haud dense punctato, segmento basali lævigato.
Long. 6–8 millim.

Hab. Mexico, Cerro de Plumas (*Höge*).

Antennæ slender; the two basal joints testaceous, the others dark; tenth joint about as long as broad. Palpi piceous. Head narrow, like the thorax entirely black. Elytra longer than the thorax, yellowish, with a narrow, elongate, triangular sutural patch reaching nearly to the apex, and with a large black mark at the outer angle of each, with a sutural series of about six punctures, and a discoidal series of also about six obsolete punctures, and with a marginal series of about ten punctures close to the epipleural margin. The legs are black, but the bases of the tibiæ are broadly testaceous and the tarsi are sordid yellow. In one individual, supposed to be the male, the terminal ventral plate is very slightly flattened at the middle of the extremity, and the flat part is set with fine setæ.

Three examples are before me. Höge also found at Jalapa another species of *Bolitobius* similar to *B. obliquus*, but with the terminal joint of the antennæ pallid, and the dark scutellar patch of the elytra absent; but the example is too immature for satisfactory description.

3. **Bolitobius alticola.**

Gracilis, niger; antennarum basi pedibusque testaceis, abdominis segmentorum marginibus posterioribus fuscis; elytris ex parte majore nigris, vitta obliqua testacea; abdomine parce punctato, segmento basali lævigato.
Long. 6 millim.

Hab. Guatemala, Totonicapam 8500 to 10500 feet, Quiche Mountains 7000 to 9000 feet (*Champion*).

This insect is closely allied to *B. obliquus*, but has a narrower head, a more sparingly punctured hind body, and a rather shorter metasternum, besides differing in the details of colour above mentioned.

Only one example is present from each locality; they do not agree very closely: the one from the Quiche Mountains is immature.

MEGACRONUS.

Megacronus, Stephens, Ill. Brit. Ent. v. p. 171; Fauvel, Faune Gal.-rhen. iii. p. 553.
Bryoporus, Kraatz, Ins. Deutsch. ii. p. 452.

Much confusion has prevailed about this genus and *Bolitobius* and *Mycetoporus*; but the union of *Bryoporus* with the *Megacronus* division of *Bolitobius*, while the other two genera are treated as distinct, has been proposed by Fauvel, and affords at present a

satisfactory solution of the difficulty. Probably about a score of species are known, the genus having a similar distribution to *Bolitobius*. The Central-American species are aberrant, but nevertheless the structure of their palpi is sufficiently congruous with what we find in the European species of the genus to allow me to avoid their separation at present.

1. **Megacronus oscillans.**

Niger; antennarum basi, palpis pedibusque rufo-obscuris, abdomine nigro-piceo apice rufescente; elytris crebrius seriatim punctatis.
Long. 8 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Three basal joints of antennæ obscure yellow or red, penultimate joint scarcely so long as broad. Thorax much broader than long, very shining black. Elytra very elongate, but not twice as long as the thorax, regularly covered with incomplete punctures. Hind body rather sparingly punctate, very acuminate.

The colour of the legs, palpi, and base of the antennæ readily separates this insect from *M. nigerrimus*; the form of the maxillary palpi is also a little different, they being in *M. oscillans* more truly of the form characteristic of the genus, though unusually long and slender.

Only a single individual has been found.

2. **Megacronus nigerrimus.** (Tab. VII. fig. 18.)

Totus nigerrimus; elytris crebre fortiter seriatim punctatis, abdomine crebrius punctato.
Long. 10 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Head very short; penultimate joints of antennæ evidently transverse. Thorax black, very shining, with a transverse series of six, very distant, fine punctures near the front margin, and a similar series in front of the basal margin. Elytra longer than the thorax, each with seven or eight series of very distinct punctures; the sutural series rather denser and more regular than the others, the two or three external series less regular. Hind body with the basal segment broadly impunctate in the middle; the other segments rather closely punctate, especially on the basal portion of each.

Only one specimen has been met with.

3. **Megacronus acuminatus.**

Gracilis, piceus; antennarum basi palpisque testaceis; elytris ad basin rufescentibus, fortiter, regulariter seriatim punctatis; abdomine crebre punctato, apice rufo; antennis fere gracilibus articulis nullis transversis.
Long. $6\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ with the three basal joints obscure yellow; the penultimate joints quadrate, the tenth being nearly as long as broad. Head narrow. Thorax much broader than long. Elytra each with seven or eight regular series of very distinct punctures. Hind body slender, very acuminate behind, moderately closely punctate, with a very distinct fuscous pubescence.

Also unique; the specimen is in decayed condition, and the natural colour of the elytra and hind body may be more rufescent in good examples.

4. **Megacronus meridionalis.** (Tab. VII. fig. 19.)

Gracilis, rufescens; antennis, elytris abdomineque fuscis, illis ad humeros plus minusve rufo-maculatis, antennarum basi palpisque testaceis; antennis crassiusculis, articulis penultimis leviter transversis; elytris regulariter seriatim fortiter punctatis.

Long. 5 millim.

Hab. GUATEMALA, Zapote, Panima in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ rather short and stout; joints 5–10 differing but slightly from one another; the three basal joints yellow. Head and thorax red, the latter not so long as broad, the hind angles rectangular. Elytra a good deal longer than the thorax, each with seven or eight series of punctures. Hind body with each segment fuscescent at the base, reddish behind, the segments only finely punctate, but conspicuously pubescent.

In all six specimens are before me, showing variation in the details of the colour and of the stoutness of the antennæ; in certain of the males the sixth ventral segment is provided with an elongate longitudinal carina most elevated behind, while in another there is no carina but only a tubercle behind. As the differences are but slight, and no two individuals quite agree, I must consider all to be one variable species, the type being a specimen of bright colour, with stout antennæ and only tuberculate penultimate ventral segment, from the Volcan de Chiriqui.

The figure represents a variety found at Zapote.

5. **Megacronus regularis.**

Nigricans; antennarum basi, palpis pedibusque flavis; elytris rufescentibus, ad latera et ad suturam nigricantibus; abdominis segmentorum marginibus posterioribus ferrugineis; antennis brevibus, apicem versus incrassatis, articulis penultimis transversis; elytris regulariter seriatim punctatis; abdomine subtiliter punctato.

Long. 4 millim.

Hab. GUATEMALA, Zapote, Capetillo (*Champion*).

This insect is much smaller than *M. meridionalis*, and the third, fourth, and fifth joints of the antennæ are markedly smaller; the elytra are a good deal less elongate, and the seven series of punctures on each are remarkably regular and distinct.

There is only one example from each locality.

6. **Megacronus minor.**

Gracilis, niger; antennarum basi, palpis pedibusque flavis; elytris minus dense et fortiter seriatim punctatis; antennis articulo penultimo leviter transverso; abdomine minus crebre vix subtiliter punctato.
Long. 4 millim.

Hab. GUATEMALA, Chiacam in Vera Paz (*Champion*).

Besides the dark elytra this little insect has other good characters to distinguish it from *M. regularis*, the antennæ being rather more elongate, and the punctuation of the elytra much less distinct and regular, only four or five rather indefinite series being distinguishable on each.

Only one example has been found.

MYCETOPORUS.

Mycetoporus, Mannerheim, Brachel. p. 62.

About fifty species are comprised in this genus, which, outside of the Palæarctic and Nearctic regions, possesses but a single East-Indian species.

1. **Mycetoporus coxalis.** (Tab. VII. fig. 20.)

Gracilis, elongatus, niger; antennarum articulo primo femoribusque testaceis; capite, thorace elytrisque nitidissimis, his punctorum serie suturali aliaque discoidali.
Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ elongate, evidently thickened towards the apex; tenth joint longer than broad; palpi fuscous; head narrow, attenuate in front. Thorax not so long as broad, with the anterior angles greatly deflexed. Elytra elongate, much longer than the thorax, with a regular sutural series of about twelve punctures, and a similar discoidal series, and close to the epipleural margin a rather less distinct series. Hind body slender, elongate and very acuminate, each segment at the base somewhat closely and finely punctate, but behind only sparingly punctate. Legs elongate; hind tarsi especially very long. Posterior coxæ extremely large. The male has a broad but not deep emargination in the hind margin of the last ventral plate.

Only one individual has been brought back.

Subfam. *STAPHYLININÆ.*

Group **QUEDIINA.**

This group has hitherto been defined by characters that are only variable and inconstant, and has been isolated rather on account of the facies of its components than for any other reason. There exists, however, a constant character that has hitherto escaped observation, although it defines and limits the group in a quite satisfactory manner, viz. that the prosternum is connected with the sides of the thorax behind the front angles, these being consequently free.

TANYGNATHUS.

Tanygnathus, Erichson, Käf. Mark Brand. i. p. 417; Gen. et Spec. Staph. p. 288.

Although this genus consists of only a dozen described species, yet it has a very wide distribution in the continental regions of both hemispheres, and even extends to Australia. The species are very similar to one another, and it will be necessary for the sexes to be distinguished in order correctly to discriminate them; yet the most important sexual peculiarities, being of a rather unusual character, have hitherto escaped observation; they consist of differences in those styles and tubes of the extremity of the hind body that form what is frequently called the segment of the genital armature. When the sexes have been thus distinguished it will be found that in certain species the males have the front femora armed with a remarkable comb-like organ, of which in other species there is no trace, and this character offers the only satisfactory mode of sectionizing the genus that I have been able to discover; two of the Central-American species possess this organ, while in the other two it is absent, and it is also wanting in the European *T. terminalis*.

Mr. Champion informs me that these insects are found in very wet places, in the same manner as the *Acylophori*.

1. **Tanygnathus antennalis.** (Tab. VII. fig. 21.)

Piceus; antennis elytrisque fuscis, illis elongatis; palpis testaceis, pedibus rufis; elytris dense punctatis.
Long. 6–7 millim.

Hab. GUATEMALA, Guatemala city, San Gerónimo, San Joaquin in Vera Paz (*Champion*).

Antennæ extending nearly as far back as the hind margin of the elytra, scarcely so slender as is usual in this genus, the basal and apical joints only indistinctly paler than the others. Thorax piceous, broad, the length scarcely equal to two thirds of the breadth. Elytra slightly longer than the thorax, finely but densely and rather more distinctly punctate and pubescent than is usual in this genus. Hind body obscure red, the segments darker at the base, closely punctate and conspicuously setose.

This species is rather more robust than others of the genus, and the individuals are larger than those of any other *Tanygnathus* known to me, and similar to *T. australasiæ*, Fauv. Seven specimens have been found. An individual of the male sex from San Gerónimo is figured.

2. **Tanygnathus muticus.**

Piceus; antennis sat elongatis, basi apiceque pallidescentibus; palpis testaceis, pedibus rufis, elytris nigricantibus, dense subtilissime punctatis; prothorace fortiter transverso.
Long. 5 millim.

Hab. GUATEMALA, Rio Naranjo 450 feet (*Champion*); PANAMA, Bugaba, San Miguel one of the Pearl Islands (*Champion*).

The antennæ are only of moderate length, the tenth joint being scarcely broader than long; the basal and the three or four terminal joints are evidently paler than the others. The head is nearly black, rather broad for this genus. The thorax is nearly twice as broad as long. The length of the elytra at the sides is a little greater than that of the thorax. In the male there is a very slight emargination of the hind margin of the last ventral segment, and the terminal styles are larger than in the female; there is no armature of the front femora. In the female the median lobe between the terminal styles is barbed on each side at the apex.

The unique individual from the Rio Naranjo seems to agree perfectly with the small series found on Pearl Island.

3. **Tanygnathus vilis.** (Tab. VII. fig. 22.)

Angustulus, fusco-ferrugineus; antennis fuscis, basi apiceque sordide testaceis; prothorace rufo, elytris fuscis, sutura apiceque rufescentibus; abdomine pedibusque rufis, illo segmentis singulis ad basin fuscescentibus; elytris prothoracis longitudine, tantum subtilissime punctatis et pubescentibus.

Long. 4–5 millim.

Hab. GUATEMALA, Guatemala city, San Gerónimo, Rio Naranjo 450 feet, Coatepeque 1300 feet (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, San Miguel one of the Pearl Islands (*Champion*).

Var.? Abdomine fusco.

Hab. MEXICO, Jalapa (*Höge*).

This insect is rather smaller and more slender than *T. terminalis*, and has shorter more finely punctate elytra, and its antennæ are very slightly shorter; the palpi are yellow. The thorax is of a rather obscure red colour, and is about one fourth broader than long. The elytra are not quite so dull as usual, owing to their delicate punctuation and excessively fine pubescence. The hind body is quite finely punctate, and its setæ are comparatively inconspicuous.

In the male the last ventral plate is more slender than in the female, its extremity less truncate; in the female the middle lobe between the terminal styles is bifid, and is regularly barbed with setæ on each side, while in the male this central portion is a slender, corneous, unarmed process; this latter sex has an elongate file-like process of densely placed, short, black ciliæ on the anterior face of the front femora.

The unique specimen from Mexico may be either this or some distinct closely allied species; it is too much damaged to decide positively. The individuals from the other localities show a good deal of variation in the smaller details of colour and punctuation, and I have treated the examples from San Gerónimo as the type form of the species: one of these latter is figured.

4. **Tanygnathus crassulus.**

Minus elongatus, pallide piceus fere testaceus; elytris vix fuscescentibus, antennis, palpis pedibusque pallidis,

illis tantum articulis 2° et 3° fuscescentibus; prothorace fortiter transverso, elytris illo haud longioribus.
Long. 4 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ quite slender, but not elongate. Head short. Thorax twice as broad as it is long, rather broader than the elytra; the latter short and broad, very finely but not very densely punctured and pubescent. Hind body with the first two segments quite finely punctate, the base of each of the following segments also only very finely punctate, the hinder portion densely setose.

This distinct species is known only by two male individuals; they are rather immature, so that their natural colour is not quite certain; but I have no doubt that the pallid tint of the antennæ, with only the second and third joints a little more obscure, is natural. The comb, or file, on the front legs is largely developed.

HETEROTHOPS.

Heterothops, Stephens, Ill. Brit. Ent. v. p. 256; Er. Gen. et Spec. Staph. p. 515.

This genus is widely distributed over the globe, and occurs indifferently in boreal and tropical regions. About thirty species are known.

1. **Heterothops remota.** (Tab. VII. fig. 23.)

Nigra; antennarum basi pedibusque testaceis; capite ovato, oculis a collo longe distantibus; elytris abdomineque parce punctatis, hoc subversicolore.
Long. 6 millim.

Hab. MEXICO (*Flohr*), Mirador (*Höge*); GUATEMALA, Cerro Zunil 4000 to 5000 feet, San Gerónimo (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Pena Blanca 3000 to 4000 feet (*Champion*).

Antennæ rather long and stout, reaching as far back as the base of the thorax, black, with the basal joint red or yellow; penultimate joint not transverse. Head moderately long, so that the eyes are separated from the neck by a space about equal in length to the length of the eye. Elytra slightly longer than the thorax, sparingly punctured, so as to be a little shining; pubescence rather elongate. Hind body black, with metallic reflections, the hind margin of each segment pale, its punctuation similar to that of the wing-cases.

Although so widely distributed in Central America, I have seen only half-a-dozen examples of this species. The example figured is a female from Pena Blanca.

2. **Heterothops insolita.**

Nigricans; antennarum basi pedibusque testaceis, elytris sordide testaceis; capite ovato, oculis a collo longe distantibus; elytris abdomineque parce punctatis, hoc marginibus segmentorum posterioribus testaceis.
Long. 5 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ moderately long and stout, with three basal joints yellow, the penultimate joint slightly longer than broad; palpi infuscate yellow. Thorax much narrowed in front. Elytra longer than the thorax, only sparingly punctured.

The colour of the elytra distinguishes this insect readily from *H. remota*, and, moreover, it is considerably more slender. Only one individual has been found.

3. **Heterothops orbicularis.** (Tab. VII. fig. 24.)

Nigricans; antennarum basi et apice, pedibus elytrisque testaceis; capite suborbiculari, oculis a collo parum distantibus; elytris parce, abdomine crebrius subtiliter, punctatis.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 3000 to 4000 feet, Boquete 3500 feet (*Champion*).

Antennæ rather short and not stout, the two or three basal joints red or yellow, the following dark, the apical joint again paler. Head small, the large eyes occupying nearly all the sides, so that only a short interval (not one fourth the length of the eye) separates the eye from the neck. Elytra only about as long as the thorax, sparingly punctate. Hind body finely punctate, the hind margins of the terminal two segments pale.

Five examples of this species have been found. The specimen figured is from Panama.

4. **Heterothops tenuicornis.**

Minor, angustula, nigricans; antennis tenuioribus fuscis, pedibus fusco-testaceis, elytris brunneis; capite suborbiculari, oculis a collo parum distantibus; abdomine crebre subtiliter punctato.
Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ remarkably slender, the two basal joints rather thicker than the others. Elytra scarcely longer than the thorax, rather sparingly punctured. Hind body very acuminate.

The slender antennæ are peculiar to this species. Only a single example has been found.

ACYLOPHORUS.

Acylophorus, Nordmann, Staph. p. 127, t. 1. f. 9; Erichson, Gen. et Spec. Staph. p. 519.

This is a well-known genus, of wide distribution in both hemispheres, extending even to Australia. About twenty-four species are known, so that our region has more than an average number of species, and in fact it is probable that the warmer portions of the New World are the headquarters of the genus.

1. **Acylophorus luctuosus.**

Acylophorus luctuosus, Solsky, Hor. Soc. Ent. Ross. v. p. 122[1].

Hab. Mexico[1] (*Boucard*).

From the remarks in the preface to Mr. Solsky's paper it appears probable this insect was found at Oaxaca; it is stated to have a smooth scutellum and elytra shorter than the thorax; it is unknown to me.

2. **Acylophorus didymus.** (Tab. VII. fig. 25.)

Nigerrimus, nitidus; mandibulis, palpis tarsisque fulvo-rufis; capite elliptico, haud anterius acuminato; elytris prothoracis longitudine, parce punctatis; scutello tantum punctis duobus vel tribus subobsoletis; abdomine haud dense sat fortiter punctato.

Long. 8 millim.

Hab. Guatemala, Dueñas (*Champion*).

Antennæ black, rather elongate, a good deal thicker externally; second, third, and fourth joints rather longer, only the ninth and tenth shorter than broad. Head narrow and somewhat elongate, but not acuminate in front, sparingly pubescent and somewhat coarsely punctate beneath.

3. **Acylophorus proximus.**

Niger, nitidus; femoribus late flavis, antennarum articuli primi basi tarsisque piceis; capite ovato; elytris scutelloque parce punctatis, illis ad marginem posteriorem spinulis crassiusculis armatis; abdomine apicem versus fortiter attenuato, segmentis singulis ad basin crebre subtiliter, apicem versus parce, punctatis.

Long. 7 millim.

Hab. Guatemala, Dueñas, Paso Antonio (*Champion*).

The head beneath is indistinctly punctate and sparingly pubescent; the scutellum bears about six or seven punctures; the flavescent femora are black at the extreme base and apex.

This insect is extremely close to the Amazonian *A. acuminatus*; but the colour of the legs is a little different, the hind body is more sparingly punctate, as is also the scutellum.

4. **Acylophorus simplex.**

Nigerrimus; capite thoraceque nitidis, tarsis piceis; capite elliptico; elytris paulo longioribus quam prothorax, crebre fortiter punctatis; scutello parce punctato; abdomine nigerrimo, sat crebre fortiter punctato.

Long. 9 millim.

Hab. Mexico, Oaxaca, Mirador (*Höge*), Cordova (*Sallé*).

The head is sparingly punctate and pubescent beneath, and the scutellum bears only five or six punctures; the setæ at the hind margin of the elytra are fine; the hind

body is more evenly punctate than in many *Acylophori*, that is, the punctures at the base of each segment are not greatly more crowded than at the hind margin.

I have seen only four examples; the larger size, and the larger less acuminate head, longer antennæ, and several other slight differences readily distinguish the species from *A. mexicanus*, to which it is very similar.

5. **Acylophorus mexicanus.**

Niger; capite thoraceque nitidis, abdomine vix versicolore; capite ovato, anterius acuminato; elytris paulo longioribus quam prothorax, crebrius fortiter punctatis; scutello crebre punctato; abdomine æqualiter dense punctato; pedibus (præsertim anterioribus) cum palpis etiamque antennis plus minusve aurantiacis.
Long. 7 millim.

Hab. MEXICO (*Truqui, Flohr*), Oaxaca, Las Vigas (*Höge*).

Although only five exponents are before me from the above sources, they agree closely *inter se*, and are readily distinguished by the characters above given; the head is almost entirely without pubescence beneath, the scutellum rather closely and finely punctured, the sculpture of the elytra is rough and scabrous; when the hind body is looked down on directly from above it has a slight cinereous or opalescent reflection: the antennæ are small.

6. **Acylophorus parviceps.**

Angustior, niger, nitidus; capite ovato, anterius acuminato; elytris thoracis longitudine, crebre fortiter punctatis; scutello sat crebre punctato; abdomine crebre punctato, apice angusto; pedibus (præsertim anterioribus) cum palpis etiamque antennis articulo basali, basi apiceque, testaceis.
Long. 7 millim.

Hab. GUATEMALA, near the city (*Champion*).

Although extremely similar to *A. mexicanus*, yet I am disposed, in a genus where the species are so very closely allied as is the case in *Acylophorus*, to consider that these Guatemalan individuals represent a distinct species. They are slightly smaller, with the elytra a little shorter, and with the hind body very slender behind, and the punctuation is a little less dense; a more or less evident rufescent tint exists on the hind parts of the two terminal segments, but this is scarcely visible except when the individuals are moistened.

The six individuals found agree almost *ad punctum* one with the other.

7. **Acylophorus chontalenus.**

Piceus, nitidus; palpis flavis, pedibus rufis, abdomine purpureo-versicolore; capite anguste ovato; elytris fere brevioribus quam prothorax, cumque scutello crebrius minus fortiter punctatis; abdomine crebre punctato, crebriusque setuloso, segmentis sexto septimoque ex parte rufescentibus.
Long. $7\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ slender, piceous, the basal joint more dilute at its base, and the apical one a little paler; parts of the mouth clear yellow. Thorax but little broader than long,

piceous, very shining. Elytra rather darker, but still not quite black. Hind body with each segment strongly purpurescent behind; on the penultimate segment the colour behind becomes reddish, and the terminal segment is still more dilute behind. The legs are red, the anterior brighter than the posterior; the genæ behind the eyes are densely and finely punctate, but the under surface of the head is very little punctate.

Only one individual is known.

8. **Acylophorus palpalis.** (Tab. VIII. fig. 1.)

Minus convexus, nigricans; oris partibus pedibusque testaceis, tibiis fuscis; elytris cum scutello dense punctatis; abdomine subtiliter punctato, dense pubescente, ante apicem rufo-cingulato; palporum articulo ultimo incrassato, femoribus posterioribus hirsutis.

Long. $7\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This insect will readily be recognized by the greater than usual development of the last joint of the maxillary palpus; the minute acumen with which it is provided is moreover placed on one side of the apex instead of in the middle; the hind femora are unusually densely pubescent beneath, and on the upper surface the pubescence is distinctly visible at their margins. The hind margin of the sixth segment of the hind body is rufescent, and the terminal segment is broadly red at the base. The genæ behind the eyes are extremely finely punctate and pubescent, while the under surface of the head is but slightly so.

A pair of this species has been found.

9. **Acylophorus planatus.**

Minus convexus, nigricans; capite thoraceque nitidissimis; elytris haud longioribus quam thorax, fusco-piceis, cumque scutello dense punctatis, haud nitidis; abdomine versicolore, dense punctato denseque pubescente et setuloso, segmentis sexto et septimo singulatim ad apicem rufis; pedibus testaceis.

Long. $7\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Head rather large; antennæ rather long and stout; the genæ behind the eyes densely and finely punctate; under surface of head very evidently pubescent and punctate. Hind body with a strongly opalescent or iridescent tint, and with the clothing of hairs and setæ greatly developed; the hind margin of each of the two terminal segments conspicuously yellowish red, and the extreme base of the terminal segment also of this colour. The parts of the mouth are yellow.

Of this distinct species only one example has been met with.

MIMOSTICUS.

Genus inter *Quedium* et *Acylophorum* quasi intermedium, ab hoc antennis haud geniculatis, ab illo antennis subfractis articulo basali longiore, prothoraceque absque membrano stigmatico, distinctum.

This genus is closely allied to the Australian *Quediopsis*, Fauvel, from which it differs

by the fact that the four basal joints of the anterior tarsi are dilated and by the more elongate maxillary palpi. The genæ are not emarginate; and the dilatation of four joints of the front feet is common to the two sexes. The facies is that of such species of *Philonthus* as are of moderate size and slender form and have a narrow head, *e. g.* *P. longicornis*, Steph.; but from these insects *Mimosticus* is readily distinguished by the structure of the prothorax, the margins of which are strongly trenchant (or cutting) beneath, even at the free front angles.

1. **Mimosticus viridipennis.** (Tab. VIII. fig. 2.)

Elongatus, niger; elytris viridibus, abdomine viridescenti-versicolore, segmento ultimo ad apicem stylisque terminalibus ad basin rufescentibus.

Long. 12 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ entirely black, linear, reaching as far back as the base of the thorax; each joint longer than broad, the basal joint quite as long as the second and third together: these two subequal. Head scarcely half as broad as the thorax; this latter broader than long, narrowed in front, base and hind angles quite rounded, the surface black, in a certain light opalescent. Elytra rather longer than the thorax, moderately closely and finely punctate. Hind body rather sparingly punctate, its surface with brilliant viridescent reflections, becoming fiery at the hind margins of each segment; this fulgid colour is broadest on the terminal segment, and the base of this latter segment shows a large impunctate space both on the ventral and dorsal surfaces. The legs are quite black.

Mr. Champion found only a single example of this insect. It has the central lobe of the terminal armature bilobed; and as I have in my collection the male of a closely allied Colombian species, I am able to conclude that Mr. Champion's specimen is a female.

QUEDIUS.

Quedius, Stephens, Ill. Brit. Ent. v. p. 214; Erichson, Gen. et Spec. Staph. p. 523.

This large genus comprises about two hundred described species, and is nearly cosmopolitan in its distribution. From Tropical South America we know, however, as yet, only three or four species, most of them of a type apparently peculiar to and characteristic of the region; Chili possesses numerous very aberrant species. The Central-American species fall into three natural groups, the first of which contains a single species agreeing with the European and North-American forms, while the second group is formed by three species allied to the Australian forms of the genus; the remaining, third, group comprises the greater part of the Central-American *Quedii*, and is peculiar to the Tropical-American region, with possibly a species or two north of Mexico.

§ 1. *Genæ with a raised margin; elytra evenly and regularly punctate and pubescent.*

1. **Quedius advena.**

Niger; capite thoraceque subviridescentibus, elytris viridescentibus, antennis pedibusque fuscis, tarsis fusco-testaceis; capite suborbiculato.
Long. 8 millim.

Hab. Mexico, Las Vigas (*Flohr*).

Antennæ rather short; basal joint pitchy red; second and third joints nearly black, except that the second is red at the base; tenth joint as long as broad. Head broad, the eyes extending more than three fourths of the length of the sides; four coarse punctures in a transverse line near the front of the eyes, the inner puncture touching the margin of the eye. Thorax nearly as long as broad, a little narrowed in front. Scutellum smooth, without any punctures. Elytra rather longer than the thorax, somewhat sparingly and not very finely punctured. Hind body black, feebly metallescent, closely, very finely punctate. The front tarsi are rather broadly dilated in each of the sexes.

This insect appears very closely allied in structure to the European *Q. attenuatus*; but the rather elongate terminal joint of the maxillary palpus is very slender and acuminate. Mr. Flohr has sent nearly a dozen examples.

§ 2. *Genæ without raised margin; elytra evenly and regularly punctate and pubescent.*

2. **Quedius læticulus.** (Tab. VIII. fig. 3.)

Angustulus, nigerrimus; antennis pedibusque testaceis, elytris læte æneo-viridibus, abdominis apice late rufo.
Long. $7\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This insect is similar in size and shape to the European *Q. attenuatus*. The antennæ are short and stout, with joints 5–10 transverse; palpi yellow. Thorax but little rounded at the sides, about as long as broad, very black and shining. Elytra slightly longer than the thorax, sparingly and finely punctate; scutellum sparingly punctate. Hind body very black, with the terminal styles, the last segment and a portion of the preceding segment red, sparingly but not finely punctate.

Only one specimen has been found; it is apparently a female, though the front tarsi are broadly dilated.

3. **Quedius championi.** (Tab. VIII. fig. 4.)

Niger; antennarum basi pedibusque testaceis, elytris brunneo-testaceis, ad suturam late fuscis, abdomine fulvo-pubescente, segmentorum marginibus posterioribus ferrugineis, ultimo ex parte majore rufo.
Long. 7 millim.

Hab. Guatemala, San Gerónimo 3000 feet, Purula (*Champion*).

Head orbicular; antennæ with the three basal joints yellow, the others dark, the penultimate joints slightly transverse; palpi fuscous. Thorax broader than long. Elytra a little longer than the thorax, of a pale brownish colour, broadly dark about the suture, finely and rather closely punctate; scutellum closely punctate. Hind body rather sparingly punctate; the hind margin of the penultimate segment rather broadly red, the following segment red with a black patch on the middle; terminal styles red, fuscous towards the extremity.

Four individuals have been found; the one figured is from San Gerónimo.

4. **Quedius illatus.**

Parvus, niger; antennarum basi pedibusque testaceis, elytris rufo-brunneis; abdomine versicolore, segmentis apicalibus margine posteriore rufescente, crebrius punctato.
Long. 6 millim.

Hab. MEXICO (*Flohr*), Jalapa (*Höge*); GUATEMALA, Sinanja in Vera Paz; PANAMA, Volcan de Chiriqui up to 4000 feet (*Champion*).

Antennæ scarcely thicker externally; the three basal joints red, the others darker; tenth joint as long as broad. Head orbicular. Thorax short, much broader than long, much narrowed in front, like the head shining black. Scutellum densely punctate; elytra of a dark red colour, closely and finely punctate. Hind body strongly metallic, with purplish or iridescent reflections, closely punctured, and with much black pubescence; the hind margin of the penultimate segment lurid red or yellow, the terminal segment with this colour more extensive on the hind margin; terminal styles red, with long, dense, black pubescence.

Although widely distributed, this is apparently not a common species, as I have seen altogether only ten individuals. The specimens from Mexico and Guatemala have the legs nearly black, but do not apparently differ in other respects.

§ 3. *Genæ with a raised margin; elytra polished, with only a few setigerous punctures, which are arranged in a serial manner, and in addition with a very regular series of conspicuous punctures contiguous with the epipleural margin.*

5. **Quedius basiventris.** (Tab. VIII. fig. 5.)

Rufo-testaceus, politus, nitidissimus; capite abdominisque segmentis duobus basalibus nigris; elytris sublævigatis punctis nonnullis setigeris subobsoletis impressis, abdomine parce punctato.
Long. 7–8 millim.

Hab. GUATEMALA, Volcan de Atitlan about 3000 feet, Mirandilla 1700 feet, Las Mercedes, Pantaleon, San Isidro (*Champion*); PANAMA, Volcan de Chiriqui between 2500 and 4000 feet (*Champion*).

Antennæ yellow, a little thicker towards the extremity, the three or four penultimate joints a little subserrate internally. Head orbiculate, but a good deal narrower than

the thorax; this latter without discoidal punctures. Elytra about as long as the thorax, each with about a dozen irregularly placed obscure punctures, each of which bears a conspicuous erect black seta, the larger of these setæ being three or four placed at each outside; touching the epipleural margin there is a series of obscure punctures, the punctures on the posterior part of this series distant and obsolete. Hind body with the two basal segments black, strongly iridescent. The male has a slight emargination in the middle of the hind margin of the last ventral plate.

This species apparently varies much in colour: all the red parts may become black, except the antennæ, legs, and two apical segments of the hind body, and, on the other hand, the head may be in greater or less extent red. From Panama I have seen only two individuals, both of them extreme colour-varieties, but very different from one another.

This insect was found amongst branches cut from trees.

6. **Quedius jocosus.** (Tab. VIII. fig. 6.)

Nitidus, rufus; capite abdomineque nigris, hoc apice læte rufo-testaceo, pedibus testaceis; elytris thoracis longitudine, punctis nonnullis magnis seriatim impressis; abdomine crebre subtiliter punctato.
Long. 10½ millim.

Hab. Guatemala, near the city, at an elevation of 5000 feet (*Champion*).

The head is broad and short, shining black, the clypeal membrane pale, almost ivory-like, the mandibles and palpi red. The punctures on the elytra are rather large, and are disposed serially, five or six along the suture; a similar number on a series within the shoulder, two punctures being interposed on the disk between these two series; at the epipleural margin there is a regular series of twelve to fourteen setigerous punctures, and above these there are at the side three or four elongate outstanding black setæ. The basal segment of the hind body has only a few punctures, a large space on it being bare, but the segments beyond the second are rather closely and regularly punctate; the pale colour is confined to the two terminal segments and the apical processes. The male has a deep notch on the last ventral segment.

Mr. Champion found three individuals of this elegant insect running on the banks of streams, and I have for some years preserved an individual in my collection. There is no sexual difference of coloration.

7. **Quedius graciliventris.**

Nigerrimus, nitidus, politus; capite inter antennas abdominisque apice rufis; mandibulis, palpis, antennarum basi pedibusque anterioribus testaceis, pedibus intermediis fusco-testaceis, tarsis nigris; elytris longioribus quam prothorax, punctis nonnullis haud magnis impressis; abdomine gracile fere impunctato.
Long. 9 millim.

Hab. Panama, Volcan de Chiriqui between 2000 and 6000 feet (*Champion*).

The head is orbicular, but not very large; the red colour on its anterior part is only

small in extent. The punctures on the epipleural series are not large, and are about twelve in number. The slender hind body has the four basal segments black, a little iridescent, each with a transverse series of punctures at the base, but the series on the first segment is very indistinct; the two terminal segments and the apical styles are red. The front legs are yellow, with the tarsi a little infuscate; the middle legs yellow at the base, becoming darker outwards, so that the tarsi are nearly black; the hind legs black.

The above description applies to five individuals from Panama, all of which are males; and from the same locality, but not apparently found at the same spot or time, I have before me eight female individuals, which are rather larger and have all the legs, the palpi, base of the antennæ, and front of the head quite or nearly black. Two female individuals from Guatemala are intermediate in colour between the males and females from Panama: it is thus impossible for me to say to what extent these colour-variations may be sexual or due to other causes, and it is even possible that all may not be really one species, though it is more than probable that the individuals from Panama are the sexes of a single species.

8. **Quedius concolor.**

Nigerrimus, nitidus, politus; antennis, palpis pedibusque anterioribus testaceo-fuscis; capite orbiculato-ovato; elytris longioribus quam thorax, punctis nonnullis haud magnis impressis; abdomine apicem versus parce punctato.

Long. 10 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ short, but little thickened externally, dusky yellow, the base rather darker than the apex. Hind body entirely black, with a slight iridescent tint, the two basal segments each with a transverse series of punctures near the base; the following segment at the sides sparingly punctate; the three apical segments sparingly, not very finely, punctate.

This species is represented only by a unique female. It is readily distinguished from *Q. graciliventris* by the unicolorous hind body, and it is of less slender form; but in other respects greatly resembles that species. The front legs are darker on the anterior than on the posterior aspect.

9. **Quedius anthracinus.**

Quedius anthracinus, Solsky, Hor. Soc. Ent. Ross. v. p. 125 [1].

Hab. MEXICO [1].

I am not acquainted with this species, which appears to be founded on an entirely black *Quedius* with iridescent hind body, and allied in many respects to the following species.

10. **Quedius arrogans.** (Tab. VIII. fig. 7.)

Niger, nitidissimus; abdomine iridescente, parce punctato; capite orbiculato; elytris paullo longioribus quam prothorax, punctis nonnullis setigeris conspicuis impressis.
Long. 11–12 millim.

Hab. Panama, Volcan de Chiriqui, at elevations between 2000 and 6000 feet (*Champion*).

This species has a very broad head; and the head, thorax, and elytra are of a very shining intensely black colour; the upper surface of the hind body is strongly iridescent, the basal portions of some of the middle segments being indeed occasionally of a lurid red colour. The mandibles are piceous at the apex. The disposition of the few punctures on the elytra is much the same as it is in *Q. graciliventris*, but the punctures themselves are not so small as in that insect. The two apical segments of the hind body are quite sparingly punctured; the one preceding them is still more sparingly punctate, except at the base, and the two basal segments are punctate only at the base, the punctuation not being reduced, however, to a single transverse series. The anterior tarsi are of dark colour and are very broad. In the male the emargination of the tip of the apical ventral plate is preceded by a rather elongate depression of the surface.

Four individuals have been found.

11. **Quedius flavicaudus.**

Niger, nitidissimus; abdomine opalescente, apice late rufo-testaceo, capite anterius plus minusve rufescente; antennarum basi, mandibulis, palpis tarsisque anterioribus piceis vel rufis; elytris vix longioribus quam prothorax, punctis nonnullis setigeris conspicuis impressis; capite transversim orbiculato.
Long. 11–12 millim.

Hab. Panama, Volcan de Chiriqui between 2000 and 4000 feet, Bugaba (*Champion*).

This insect has the two apical segments of the hind body as well as the terminal styles bright red or yellow; the apical segments are but sparingly punctate, the one preceding them not quite so sparingly, especially at its base; the three basal segments have some punctures at the base and sides of each, but those on the basal segment are only very few; when fully extended it is seen that the red colour of the penultimate segment leaves the extreme base dark. The colour of the front of the head and of the base of the antennæ is apparently rather variable. The male has a broad, not deep, emargination at the middle of the tip of the last ventral plate.

Several specimens have been found of this species. A very similar but distinct form occurs at Rio de Janeiro.

12. **Quedius rufinasus.**

Niger, nitidissimus; abdomine apice late testaceo; capite orbiculato, anterius late rufescente; palpis, mandibulis tarsisque rufis; elytris haud longioribus quam prothorax, punctis nonnullis setigeris magnis impressis.
Long. 10 millim.

Hab. Panama, David (*Champion*).

Antennæ short, joints 6–10 transverse. Hind body but little opalescent, the two terminal segments entirely red, as well as the styles; the first segment has only a very few punctures, and these do not extend as a complete series across its base; the following segment has a complete series across the base and some punctures at the sides, and the three following segments are more evenly, though still only sparingly, punctate; the tarsi, though flavescent or rufescent, have the basal joint piceous.

Only a single female has been found of this species. Although very similar to *Q. flavicaudus*, it has a narrower head and shorter antennæ, and also the elytra slightly shorter, with more conspicuous punctures, and differs too a little in the details of colour and punctuation.

13. **Quedius mexicanus.**

Niger, nitidissimus; abdomine sat iridescente, apice late testaceo; antennis tarsisque testaceis, illis basi picea, oris partibus rufis; elytris prothoracis longitudine, punctis nonnullis setigeris conspicuis impressis; capite orbiculato.
Long. 11 millim.

Hab. Mexico, Cordova (*Sallé*), Mirador (*Höge*).

This is another of the extremely closely allied species of this group, and is best distinguished by the flavescent or rufescent antennæ, which are paler externally than at the base, this latter part being indeed piceous, and by the pallid tarsi. The hind body is not quite so sparingly punctured as in the allied species, but, as in them, the punctuation is deficient on the middle of the basal segments.

I have seen only two females, which do not agree exactly, as in one the punctuation of the hind body is finer and the legs are paler in colour, the femora being piceous: in both individuals the anterior tibiæ are deeply infuscate yellow.

14. **Quedius verecundus.**

Niger, nitidissimus; mandibulis tarsisque versus apicem piceis, abdomine purpureo-versicolore, crebrius æqualiter punctato; capite transversim orbiculato; elytris thoracis longitudine, punctis grossis seriatim impressis.
Long. 13 millim.

Hab. Panama, Volcan de Chiriqui between 2500 and 4000 feet (*Champion*).

The antennæ are short, scarcely so long as the head and half the thorax, and are very little thickened externally; joints seven to ten being a little transverse. The elytra possess very large punctures, nine or ten extending from the base to the apex along the suture, and a series of seven or eight within the shoulder, and four or five large punctures are placed obliquely between these series; on the outer margin there is another series, and the epipleural series is very regular and distinct. The punctuation of the hind body is rather coarse and moderately close; on the basal segment it is absent from a small space on the middle of the hind margin.

The only individual found is a very decayed and mutilated female; probably in the fresh state the front of the head and base of the antennæ may be piceous; the labrum is very large.

15. **Quedius protensus.**

Niger, nitidus; antennarum basi, partibus oris pedibusque anterioribus rufis; elytris rufo-sanguineis, pedibus posterioribus piceis, tarsis rufis; capite orbiculato; elytris fere brevioribus quam prothorax, punctis nonnullis, seriatis, conspicuis impressis; abdomine magno, sat evidenter versicolore, crebrius æqualiter punctato.
Long. 14 millim.

Hab. Guatemala, Dueñas (*Champion*).

Antennæ short, red at the base, darker externally; the eighth and ninth joints scarcely transverse. The elytra, of a dark red colour, have the arrangement of punctures seen in *Q. verecundus* and other allies, but the punctures are not numerous, there being only four or five along the suture; the posterior one or two of these are indistinct, and the last of them is far in front of the hind margin; the intra-humeral series is irregular and consists of five or six punctures. The hind body is larger than in the allied species, and is rather closely and coarsely punctate; the basal segment is without impunctate space; the hind margin of the penultimate segment is narrowly reddish, as is the extreme base of the apical segments, and also the terminal styles.

Only a single mutilated individual has been found.

16. **Quedius rivorum.**

Niger, nitidus; antennis, partibus oris pedibusque testaceis; elytris sanguineo-rufis circa scutellum nigris, punctis seriatis magnis impressis; abdomine subversicolore, crebrius punctato, apicem versus rufo variegato.
Long. 9–10 millim.

Hab. Guatemala, near the city (*Champion*).

Var. Capite anterius latius rufescente.

Hab. Mexico, Juquila (*Sallé*).

Antennæ short, a little thicker externally, the three penultimate joints transverse. Head orbiculate, not so much constricted at the neck as in most of the allied species; the eyes, however, very prominent, the front margin vaguely and narrowly rufescent. Elytra hardly so long as the thorax, polished, of a dark red colour, with a black patch round the scutellum, and with the outer margin black; the serial punctures are large and conspicuous, and disposed as in the allied species; those of the sutural series are not so large as the rest. The hind body is black, rather closely punctate; the penultimate segment with a conspicuous red cincture behind; the extreme base of the apical segment also reddish as well as its hind margin; the terminal styles more or less infuscate red.

The male has a large depression at the tip of the last ventral plate, and the hind

margin is emarginate; the two preceding segments are flattened along the middle, and on this part densely and finely punctate, and furnished with a close yellow pubescence.

Mr. Champion has found a series of ten individuals of this species; it inhabits the banks of streams. The unique Mexican individual is apparently immature, and though it differs minutely in some points can hardly be a distinct species. I have two very closely allied Brazilian new species.

QUEDIONUCHUS.

Caput quadrato-orbiculare, collo abrupto. Palporum articulus ultimus gracilis; genæ immarginatæ. Prothoracis margines angustæ, parum inflexæ. Femora posteriora longius fortiterque spinulosa. Tarsi posteriores graciles.

This genus will comprise, in addition to the Central-American species here enumerated, some undescribed Japanese forms, and the well known European *Staphylinus lævigatus*, Gyll., referred by modern authors to *Quedius*. Although approached in one or more of its peculiarities by different sections of *Quedius*, the genus is a truly distinct and natural one, on account of the above combination of characters, and is of interest by the fact that it is the nearest approach made by the Quediina to the genus *Philonthus*. Indeed, in the form of the head, neck, and eyes, and the obliterated margin of the genæ, and the less developed and less infolded side margins of the prothorax, it approaches very closely to some of the Staphylininæ. Its nearest allies in the genus *Quedius* are *Q. impressus* and *Q. capucinus*. All the species of *Quedionuchus* are subcortical in their habits; and all of them have the usual diffuse punctuation of the wing-cases absent, the surface being smooth (except at the lateral margins) and bearing only a few serial setigerous punctures.

1. **Quedionuchus impunctus.**

Subdepressus, niger; pedibus palpisque piceis, his articulo ultimo illis tarsis rufis; elytris longioribus quam prothorax, subopacis, lævigatis; abdomine parce punctato.
Long. 9–14 millim.

Quedius cordilleræ, Chev. in. litt.[1]
Quedius impunctus, Solsky, Hor. Soc. Ent. Ross. v. p. 124.

Hab. Mexico [1], Popocatepetl 12,000 feet (*Truqui*), Jacale, Orizaba (*Sallé*), Ciudad Mexico (*Flohr & Forrer*), Las Vigas, Jalapa, Oaxaca (*Höge*), Guatemala, Volcan de Agua, 8500 to 10,500 feet (*Champion*).

Var. Elytris rufis.

Hab. Mexico, Oaxaca, Jalapa (*Höge*), Durasnal, Orizaba, Parada (*Boucard, coll. Sallé*).

Antennæ rather short and stout, nearly black; third joint longer than the second, fifth about as long as broad, sixth to tenth each a little transverse. Eyes but little prominent, and not extending backwards quite half the length of the sides. Thorax about as long as broad, a little narrowed in front and slightly sinuate at the sides; the front

angles rather prominent, not at all rounded; near the front margin on each side of the middle with a longitudinal series of three punctures, a large puncture near the lateral margin in front of the middle, and a few irregularly placed punctures near the front margin on each side. Elytra a little longer than the thorax, the surface dull, owing to a most minute dense sculpture, only to be detected by a strong magnifying-power, and also obscurely wrinkled, but without true punctuation, except that there are a few obsolete serial punctures, three or so near the suture, another longitudinal series of four or five within the shoulder, and one or two punctures between these two series. Hind body with a scanty but distinct fine punctuation. The front tarsi of the male are a little broader than those of the female, and in the former sex there is a small notch at the tip of the last ventral plate.

The species apparently varies a good deal; the hind body is frequently more or less flavo-piceous; it is possible the form with red wing-cases may prove to be a distinct species, as Höge found a large series of the type form at Las Vigas without any of the more brightly coloured form. Certain smaller individuals from Las Vigas and Oaxaca with shorter elytra, and rather paler legs, antennæ, and palpi, depart much from the typical forms. Only a single decayed individual has been received from Guatemala.

Solsky's description was apparently drawn up from a single female, and is so erroneous in respect of the position of the lateral marginal puncture of the thorax, of the punctuation of the hind body, and in making no mention of the serial punctures on the wing-cases, that I have thought well to replace it by a fresh one. M. Fauvel assures me that he has ample evidence from correspondence with the late Mr. Solsky that this is the species he really intended to describe.

2. **Quedionuchus spinipes.**

Piceus; antennis, palpis pedibusque rufis, tibiis piceis; elytris lævigatis, subopacis, brevioribus quam prothorax; abdomine parce punctato.

Long. 9–10 millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet, Totonicapam 8500 10,500 feet (*Champion*).

Var.? An femina? Tibiis posterioribus breviter spinosis.

Hab. MEXICO, Las Vigas (*Höge*).

This species is closely allied to *Q. impunctus*, but the individuals are smaller, the elytra are much shorter, the colour is paler, the antennæ are more slender, and the posterior femora (in the male if not in the other sex) are stouter and armed with longer and stronger spines. The metasternum is in this species so much reduced in length that the tips of the middle coxæ very nearly touch the hind ones. The head is elongate behind the eyes, which are consequently remote from the neck as in *Q. impunctus*.

The three individuals found in Guatemala are males, and there is some doubt whether the Mexican example (a female) is really conspecific with them.

3. **Quedionuchus femoralis.**

Niger, nitidus; abdomine, palpis tarsisque piceis; elytris subopacis, vix longioribus quam prothorax, lævigatis; abdomine parce punctato; femoribus posterioribus subtus ultra medium incrassatis spinisque majoribus armatis.
Long. 14 millim.

Hab. Guatemala, Totonicapam, 8500 to 10,500 feet, Quiche Mountains 7000 to 9000 feet (*Champion*).

This species is closely allied to *Q. impunctus*, but is of more elongate and parallel form, and is readily distinguished by the incrassate ridge of the hind femora; this is not a sexual character, as two of the three specimens found are females, and have the femora and their armature quite as largely developed as the third individual, which is a male.

4. **Quedionuchus angustus.**

Niger, nitidus; palporum articulo ultimo tarsisque rufis; capite breviter orbiculato; elytris paulo brevioribus quam prothorax, subopacis; abdomine parce punctato.
Long. 8½–9 millim.

Hab. Guatemala, Totonicapam, 8500 to 10,500 feet (*Champion*).

This is closely allied to *Q. impunctus*, but is a smaller and narrower insect, with shorter elytra, and especially with a smaller head, so that the distance between the hind margin of the eyes and the neck is much less. There is merely a scarcely perceptible emargination of the last ventral plate in the male.

Ten individuals have been found. Nine of them agree very closely *inter se*, but the tenth is a variety of larger size, with rather shorter picescent elytra, and a hind body also of this colour; it is a female and may prove to be a distinct species; it has some resemblance to *Q. spinipes*, but the head is of different shape, and the antennæ are black.

5. **Quedionuchus nigerrimus.** (Tab. VIII. fig. 8.)

Nigerrimus, nitidus; elytris lævigatis, sat nitidis, multo longioribus quam prothorax; abdomine parce punctato.
Long. 10–11 millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet, San Gerónimo 3000 feet (*Champion*).

This is very closely allied to *Q. impunctus*, but is really distinguished by the intense black colour of the head and thorax, which also are very shining, and by the fact that the elytra have no trace of fine alutaceous sculpture. The palpi and antennæ are quite black. The head is smaller, the eyes on the contrary rather larger than in *Q. impunctus*,

and thus it is that the space between the hind margin of the eye and the neck is much shorter than in *Q. impunctus*, and that the postocular puncture on the temple is much nearer the eye.

The male has a broad, shallow emargination at the tip of the last ventral plate.

Eight specimens have been found at Cerro Zunil, and one at San Gerónimo; they show no variation. Like its congeners, it lives under bark of dead trees.

QUEDIOMACRUS.

Antennæ crassæ, subfusiformes; genæ distinctæ, immarginatæ. Prothoracis margines angustæ, parum inflexæ. Tarsi posteriores breves, subdeplanati, subtus ciliis elongatis adpressis vestiti.

The genæ though destitute of a raised margin are separated by a distinct suture from the under surface of the head. The mandibles are large and the left one is furnished in the middle with two powerful teeth, the lower of which is broad and truncate or emarginate; the right mandible has a single smaller tooth, with a second very minute tooth or tubercle above it *; the eyes are not at all prominent. The side piece of the prothorax is very narrow and outside the insertion of the coxæ is not bent upwards, so that the margin of the thorax does not show there a sharp edge; there is a large horny stigmatic shield. The hind femora are armed with a series of short spinules.

The genus is allied to *Quedius*, but the short and broad, rigid hind tarsi (each joint of which bears on the under surface a series of rigid adpressed ciliæ not interrupted in the middle) are sufficiently diagnostic, and it possesses in addition other peculiarities only exceptionally found in the genus *Quedius*. It may probably prove to be peculiar to the Central-American region.

1. **Quediomacrus puniceipennis.** (Tab. VIII. fig. 9.)

Staphylinus puniceipennis, Sturm, in litt.

Quedius puniceipennis, Solsky, Hor. Soc. Ent. Ross. v. p. 123[1].

Hab. Mexico [1], Puebla (*Sallé*), Esperanza (*Höge*).

2. **Quediomacrus pollens.**

Subdepressus, nigerrimus, nitidus; capite anterius obsolete punctulato, prothorace fortiter transverso, lateribus ante angulos posteriores sinuatis.

Long. 20–28 millim.

Hab. Guatemala, near the city and at Purula (*Champion*).

This is very closely allied to *Q. puniceipennis*, but is more depressed, has the wing-cases deep black in colour, and has the antennæ rather longer and thinner.

The specimen captured at Purula was flying through the forest; the three examples from Guatemala city were found under bark.

* In the figure on Tab. VIII. of *Q. puniceipennis*, the artist has represented the right mandible as similar to the left; but this is incorrect.

CYRTOTHORAX.

Cyrtothorax, Kraatz, Berl. ent. Zeit. 1858, p. 366.

This genus possesses, besides the Central-American species, two others found in Northern South America, and two in the Indo-Chinese peninsula. Mr. Champion states that these insects are found in fungus, thus corroborating the statement already published by Messrs. Chevrolat and Sallé as to the habits of *C. buphthalmus.*

1. Cyrtothorax buphthalmus.

Bolitogyrus cribripennis, Dej. Cat. 3rd ed. p. 76[1].
Quedius buphthalmus, Er. Gen. et Spec. p. 534[2].
Cyrtothorax sallei, Kr. Berl. ent. Zeit. ii. p. 367[3], pl. iii. V h.

Hab. MEXICO[1 2 3], Flohr, Cordova (*Sallé & Höge*), Tuxtla and Toxpam (*Sallé*); GUATEMALA, Cerro Zunil 4000 to 5000 feet, Las Mercedes 3000 feet, San Gerónimo 3000 feet, Sinanja and Chiacam in Vera Paz (*Champion*).

This species varies in size and in the colour of the head, thorax, and elytra, which are sometimes brassy, sometimes black or blue-black; also in the punctuation of the head and of the sides of the thorax, and also in the width of this latter part; but I have not seen enough specimens to warrant me in considering any of the forms distinct species, there being only one or two individuals before me from each of the localities. Kraatz[3] alludes to this variation; he speaks also of a difference in the colour of the front coxæ, but this appears to me probably dependent on the state of preservation of the specimens.

2. Cyrtothorax bullatus.

Piceus, supra æneo-piceus; antennis extrorsum nigris, pedibus sordide testaceis, femoribus posterioribus fusco maculatis; capite fortiter rugoso, medio plaga circulari, elevata, sublævigata; prothorace ad latera grosse punctato; elytris fortiter punctatis, valde inæqualibus.
Long. $7\frac{1}{2}$ millim.

Hab. PANAMA, Boquete (*Champion*).

This insect is closely allied to *C. buphthalmus*, but is smaller than any individual I have seen of the latter species, and is readily distinguished by numerous peculiarities of sculpture. The head is a little narrower than the thorax, and is entirely covered with coarse sculpture except on the raised, circular, discoidal patch, on which there are only a few fine punctures. The thorax is not broader than the elytra, and has a broad space on each side very coarsely punctate, the disk being very shining and polished; the marginal punctures on the front and hind margins are extremely large, and on the front of the disk behind the two middle marginal punctures there are two rather deep, vague depressions. The elytra are coarsely punctate, and in addition have their surface more

uneven than it is in any of the other species known to me. The hind body is slender, and each of the basal segments is punctate at the sides, and the punctures of each side nearly meet in the middle on the base of each of these segments; the terminal and penultimate segments are sparingly punctate.

The only example found is in a decayed condition, and the colour of the legs may not, consequently, be very natural.

3. **Cyrtothorax cyanescens.** (Tab. VIII. fig. 10.)

Nigerrimus; capite, thorace elytrisque cyaneis; antennarum basi tarsisque piceis, femoribus basibus testaceis, antennarum articulo ultimo ferrugineo; elytris inæqualibus fortiter punctatis.
Long. 10–12 millim.

Hab. GUATEMALA, Capetillo, Cerro Zunil 4000 to 5000 feet (*Champion*).

This is extremely similar to the larger specimens of *C. buphthalmus*, except in the beautiful blue colour of the anterior parts, and the more limited extension of the yellow colour on the legs.

Of the ten specimens before me nine were found at Capetillo.

4. **Cyrtothorax fulgidus.**

Rufus; capite superne viridi, elytris viridi-cæruleis, abdomine ante apicem nigro; antennis in medio, capitis facie inferiore pectorisque lateribus nigricantibus; elytris fortiter punctatis, subinæqualibus.
Long. 11 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ with joints 3–5 red at the base, dark at the extremity, the following joints nearly black, the terminal joint pale. Thorax broader than the elytra, with a few coarse punctures on each side. Hind body very little punctate, there being only a few punctures at the side of each of segments 2–5, and very few punctures on the sixth segment; the colour of this segment is black, like that preceding it, but its hind margin, as well as the terminal segment, is red.

Only one example (a female) is known of this vividly coloured species.

5. **Cyrtothorax salvini.**

Fulvus; capite thoraceque superne et scutello viridescentibus; abdomine ante apicem nigricante, apice fulvo-testaceo; antennis rufescentibus, articulo ultimo pedibusque testaceis; elytris fortiter punctatis, subinæqualibus.
Long. 11 millim.

Hab. GUATEMALA, Zapote (*Champion*).

This insect is very similar in other respects, though so dissimilar in the colour of the thorax and elytra, to *C. fulgidus*; it has, however, the punctuation of the front of the head rather coarser and closer.

Two individuals, male and female, have been found of this species; the sexual

differences are extremely slight; the male has no emargination of the last ventral plate, but its anterior tarsi are slightly broader, and the middle ventral lobe of the terminal armature is not bilobed as it is in the female.

CORDYLASPIS.

Cordylaspis, Nordmann, Symbol. p. 17 (1837); Erichson, Gen. et Spec. Staph. p. 341.
Smilax, Laporte, Etud. Ent. p. 116 (1835).

Although the name *Smilax* has priority, it has been displaced on account of its prior use for a well-known genus of plants. There is but one species of the genus.

1. **Cordylaspis pilosa.**

Staphylinus pilosus, Fabr. Ent. Syst. i. pt. 2, p. 523[1]; Olivier, Ent. no. 42, p. 24, t. i. f. 3[2].
Smilax americanus, Lap. Et. Ent. p. 117[3].
Cordylaspis tuberculatus, Nord. Symbol. p. 17, t. f. 6[4].
Cordylaspis pilosa, Er. Gen. et Spec. Staph. p. 342[5]; Lacord. Gen. Col. Atlas, t. 15. f. 1.

Hab. NICARAGUA, Chontales (*Belt*, *Janson*); COSTA RICA (*Van Patten*); PANAMA, David, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—SOUTH AMERICA, Colombia[5], Cayenne[1 2 3 5], Brazil[5] to Rio de Janeiro.—(Sumatra ex errore[4].)

Var. Abdomine nigro, unicolore, corpore et pedibus nigro-pubescentibus.

Hab. NICARAGUA, Chontales (*Janson*). (Tab. VIII. fig. 12.)

Although so widely distributed, this peculiar insect appears to be rare, solitary specimens only being found; its habits are unknown, but the late Mr. Belt informed me he used to find it in ants' nests. The variety from Nicaragua that is represented on the Plate may be distinct; but as the species is variable in its colour independently of this particular race, I shall not treat it as distinct; it has, however, other peculiarities, the punctuation being less dense, and the peculiar setigerous punctures of the elytra rudimentary.

Group **XANTHOPYGINA.**

I propose to isolate as a distinct group those members of the Staphylininæ exhibiting the following characters, viz. superior lateral marginal line of the thorax in front not at all deflexed to the under surface, inferior line continued on to the front aspect of the thorax without joining the superior line. This group of genera is peculiar to the New World, and is indeed nearly confined to its tropical regions.

TYMPANOPHORUS.

Tympanophorus, Nordmann, Symbol. p. 9, t. f. 2[1] (palpi).
Staphylinus, Fam. XII., Erichson, Gen. et Spec. p. 402[2].

This genus has comprised till now only a single Brazilian species, unique, I believe,

in the Berlin collection. To it must also be assigned the North-American *Euryporus puncticollis*, Er., and I am able to add a third species, found in our region. It appears strange that so careful a writer as Erichson should, after having described fully [2] the peculiarities of the genus in the same work, have referred a second species of it to a genus where it was evidently misplaced. Nordmann's sketch [1] of the maxillary palpi is deceptive, and does not accord with his (or with Erichson's) description; the terminal joint of the palpus is quite as long as the preceding joint.

1. **Tympanophorus concolor.** (Tab. VIII. fig. 13.)

Nigerrimus, nitidus, pubescentia concolore minus tenui vestitus; capite parvo densissime punctato, medio lævigato; prothorace ovato-circulari, crebre fortiter punctato, linea mediali impunctata; elytris crebre fortiter punctatis, vix longioribus quam prothorax; abdomine nitido, parce punctato, conspicue nigro-pubescente.

Long. 13 millim.

Hab. Costa Rica, Irazu 6000 to 7000 feet (*Rogers*).

This species is closely allied to *T. puncticollis*, but is readily distinguished by its intense black colour, it being clothed with concolorous pubescence instead of an ashy one; the punctuation of the head is denser and coarser. The male has on the middle of the lower aspect of the penultimate segment of the hind body an elevated space open behind so as to appear deeply bifid.

I have examined four specimens of this species as well as the fragments of a fifth individual.

2. **Tympanophorus puncticollis.**

Euryporus puncticollis, Er. Gen. et Spec. Staph. p. 554 [1]; Solsky, Hor. Soc. Ent. Ross. v. p. 123 [2]; Horn, Tr. Am. Ent. Soc. vii. p. 149 [3].

Hab. North America [1 3].—Mexico [2].

The only indication of this insect belonging to the fauna of our region is Solsky's bare record of its name as a Mexican insect. It is, I believe, very rare in the United States, and I am much indebted to Dr. Horn for having supplied me with the individual that has enabled me to point out for the first time the genus to which it truly belongs.

SELMA.

Selma, Sharp, Trans. Ent. Soc. Lond. 1876, p. 426.

The genus at present comprises only one species.

1. **Selma modesta.** (Tab. VIII. fig. 14.)

Selma modesta, Sharp, op. cit. p. 427.

Hab. Nicaragua, Chontales (*Belt*).

XANTHOPYGUS.

Staphylinus, Fam. VII, Erichson, Gen. et Spec. Staph. p. 363.
Xanthopygus, Kraatz, Ins. Deutsch. ii. p. 539.

This genus is peculiar to Tropical America, where it is generally distributed, about twenty species being previously known.

1. Xanthopygus sapphirinus.

Staphylinus sapphirinus, Er. Gen. et Spec. Staph. p. 364[1]; Sharp, Trans. Ent. Soc. Lond. 1876, p. 126[2].

Hab. MEXICO, Mirador (*Höge*); GUATEMALA, Zapote, San Gerónimo, Senahu, and Purula in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—SOUTH AMERICA [1], Amazons valley [2].

The specimens of this species known to me from our region are not numerous, only about a dozen, and are all smaller than the Amazonian examples, and have the head and thorax less punctate. They show, as do also *X. solskyi* and *X. viridipennis*, great variation in the colour of the elytra, which is either violet, blue, or green, and the two examples from Mexico have the extreme base of the penultimate segment of the hind body black. The species may readily be distinguished from all the varieties of *X. solskyi* by the male characters, and by the piceous labrum and the less pallid clypeal membrane, which is less definitely marked off from the front of the head.

2. Xanthopygus solskyi.

Xanthopygus solskyi, Sharp, Trans. Ent. Soc. Lond. 1876, p. 126[1].

Hab. GUATEMALA, Panima in Vera Paz (*Champion*); NICARAGUA, Chontales (*Belt*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—SOUTH AMERICA, Amazons [1].

Erichson's *S. calidus* from Colombia I have not been able to identify in the absence of any reference to the male characters by the German author; it may prove to be either this species or *X. viridipennis*, or another closely allied species. Only a single example of *X. solskyi* has been found in Guatemala, which is probably the northern limit of its range.

3. Xanthopygus viridipennis.

Xanthopygus viridipennis, Sharp, Trans. Ent. Soc. Lond. 1876, p. 428[1].

Hab. NICARAGUA, Chontales [1] (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

This species, as well as *X. solskyi*, has been found in some numbers, but both are apparently much less common than *X. xanthopygus*. They are found about decaying vegetable matter.

X. viridipennis is readily distinguished from *X. solskyi* by the male characters, by the less dilated anterior tarsi, and the few but coarser punctures on the anterior part of the head.

4. **Xanthopygus flohri.**

Niger; elytris læte cæruleis, vel cyaneis, vel viridibus, antennis testaceis, palpis piceis, abdominis segmentis duobus ultimis totis rufo-testaceis, plantis anterioribus fuscis; capite fortiter punctato, medio lævigato, clypei membrana pallida, discreta.

Long. 12–18 millim.

Hab. MEXICO (*Flohr*), Mirador, Oaxaca (*Höge*), Cordova, Tuxtla (*Sallé*); GUATEMALA, Zapote (*Champion*).

Closely allied to *X. solskyi* and *X. viridipennis*, but readily distinguished by the picescent palpi. The clypeal membrane is pallid and very definite though short.

The male has on the middle of the under surface of the penultimate segment a transverse series of elongate concolorous setæ, and the hind margin of the following segment has a rather broad notch in the middle, about as deep as it is broad, and quite cleanly cut out, not at all membranous at the base, and differing in this way much from the emargination of this sex in *X. solskyi*. The front tarsi are only moderately broad.

I have before me three or four dozen examples from various sources of this species; it varies much in size and the smaller examples have the head and thorax less closely punctate, and the palpi not so darkly piceous; but the male characters are the same in all, and I cannot distinguish more than one species. From Guatemala only two examples have been received. In Sallé's and other collections this insect was labelled *X. sapphirinus*, Er., and I have also seen it called *X. calidus*, Er.

5. **Xanthopygus puncticollis.** (Tab. VIII. fig. 15.)

Niger; capite thoraceque violaceis, elytris cyaneis vel viridibus, abdominis segmentis duobus ultimis, palpis antennisque testaceis, his extrorsum fuscescentibus; capite parvo; thorace fortiter punctato, linea angusta mediali impunctata.

Long. 15 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This is readily distinguished from the other Central-American species by the violet tint of the head and thorax; it is very closely allied to the Amazonian *X. violaceus*, but that species has the penultimate segment of the hind body in larger part black, while in *X. puncticollis* it is entirely yellow-red, the rufescent colour invading indeed the hind margin of the antepenultimate segment.

The male has an elongate transverse series of setæ on the middle of the lower plate of the penultimate segment of the hind body, and the terminal segment has a deep notch in the middle; these characters are the same as those of the corresponding sex of *X. violaceus*, except that the hind margin of the sixth segment is apparently quite

without emargination behind. Only three specimens have been found of this elegant insect. The one figured is a female.

6. **Xanthopygus morosus.**

Subdepressus, niger; elytris nigro-viridescentibus, antennis palpisque rufis, abdominis segmentis duobus ultimis flavis; thorace parcius punctato, seriebus discoidalibus a punctis lateralibus evidenter discretis.
Long. 15 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Senahu in Vera Paz (*Champion*).

Antennæ rather short and stout, the five penultimate joints transverse. Head with distant but very coarse punctures, the middle being, however, largely smooth. Thorax quite as broad as long, only sparingly punctate, the punctures consisting of two widely separated longitudinal series along the middle, and a few distant punctures on each side. Elytra of an obscure green colour, coarsely and rather sparingly punctate. Hind body only sparingly and coarsely punctate.

The more depressed form, the shape of the thorax, and its sparse punctuation bring this species into the proximity of *X. faustus*, Er. Only a single specimen has been found in each of the localities, and both of them are females.

7. **Xanthopygus rufipennis.** (Tab. VIII. fig. 16.)

Subdepressus, niger; prosterno, pectore, scutello, elytris, antennis pedibusque rufis, tibiis omnibus femoribusque posterioribus plus minusve nigricantibus; abdominis segmentis duobus ultimis rufo-testaceis.
Long. 12–15 millim.

Hab. Mexico, Oaxaca (*Höge*); Panama, Bugaba, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Head with distant coarse punctures, which are wanting on the middle. Thorax as long as broad, only sparingly punctured, the punctuation consisting of two widely separated longitudinal series, and some lateral punctures numerous in front, but not extending to the hind angles. Elytra and hind body only sparingly punctate. The male has a short notch on the last ventral plate.

This species is very similar to *X. morosus* in form and sculpture, though so different in colour; in this respect it departs entirely from its congeners and agrees with a species of *Belonuchus* which was found by Höge at the same locality and probably in company with the *Xanthopygus*. Höge, however, has sent only one individual, but a good series was found by Mr. Champion. The Mexican example is a feeble individual and has the front and middle legs and the hind femora entirely pale.

LAMPROPYGUS.

Ligula subintegra, apice vix perspicue emarginato. Prothorax lineis lateralibus haud conjunctis, externa ad angulum anteriorem vix obducta, facie plana ante angulum fere nulla. Tarsi anteriores dilatati. Abdomen segmentis dorsalibus 2°–4^{m} basi impressis.

This genus is established for certain species which have been placed in *Philonthus*,

Staphylinus, and *Xanthopygus*, and must be located near the latter genus, from which it differs by the fact that the ligula is less emarginate, and by the great diminution of the plane surface of the front margin of the thorax at the anterior angles; by these characters it makes some approach to *Philonthus*, in which genus Erichson located the species known to him, while the species of *Xanthopygus*, as I now restrict the term, he placed in *Staphylinus*. There is still much discrepancy between *L. analis* and *L. bicolor* and the typical species of the genus, and it is probable that it will still require further analysis. The genus includes, besides the species here mentioned, *Philonthus bicolor*, Er., and an undescribed species from Monte Video. It is no doubt confined to the South and Central American regions.

1. **Lampropygus xanthopygus.**

Staphylinus xanthopygus, Nordm. Symbol. p. 45 [1].
Xanthopygus abdominalis, Har. Mun. Cat. ii. p. 597.

Hab. Mexico (*Flohr*), Guanajuato, Cuernavaca (*Sallé*), Oaxaca, Plan del Rio (*Höge*); Guatemala, San Gerónimo (*Champion*).

The male of this species has the front tarsi a good deal more dilated than the female; the penultimate ventral segment has on the middle a large depression in which is placed a series of suberect, elongate ciliæ, and is armed on each side with four elongate erect black setæ placed in an irregular row, the outer one quite at the outer side, the inner one near the bristles arising from the foveæ; the terminal segment is broadly and rather deeply emarginate, and bears on each side four very long erect black setæ.

Although the following species is usually named *S. xanthopygus*, Nordm., there can be no doubt that Nordmann's description applies rather to this. Höge found a fine series at Oaxaca; from Guatemala only one specimen has been obtained.

2. **Lampropygus cognatus.** (Tab. VIII. fig. 17.)

Philonthus xanthopygus, Er. (ex parte), Gen. et Spec. Staph. p. 496 [1].
Staphylinus xanthopygus, Sharp, Trans. Ent. Soc. 1876, p. 131 [2].
Xanthopygus cognatus, var. *minor*, Sharp, l. c.[3]

Hab. Mexico, Oaxaca (*Höge*), Cordova (*Sallé*); Guatemala, Las Mercedes 3000 feet, Pantaleon 1700 feet, Chiacam and Chacoj in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*, *Belt*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).—South America, Amazons valley [2] [3].

This species though very similar to *L. xanthopygus* is distinguished by important characters.

The male has no fovea or erect ciliæ on the penultimate ventral segment, and has only three erect setæ on each side; this latter is also the number existing on each side

of the following segment, the hind margin of which is feebly emarginate in the middle. The punctuation of the head and thorax is less deep and coarse than it is in *L. xanthopygus*, and the punctures of the discoidal series are more regular and less numerous; the elytra are quite black, without the least trace of the leaden-blue colour seen in *L. xanthopygus*, and the antennæ are shorter with the terminal joints broader. In this species the hind margin of the antepenultimate segment of the hind body is nearly always rufescent, whereas in *L. xanthopygus* it is completely and entirely black. The œdeagus in the two species presents important differences.

The variation in size is great, and the small individual on which I founded *L. cognatus* is connected by the large series secured by Mr. Champion with the larger forms which I then considered with other entomologists to be Nordmann's *S. xanthopygus*; but as this abundant species proves now to be in want of a name, the one proposed by me for the small variety may advantageously be applied to the species itself. A male from Las Mercedes is figured.

3. **Lampropygus analis.** (Tab. VIII. fig. 18.)

Philonthus analis, Er. Gen. et Spec. Staph. p. 495 [1]; Sharp, Trans. Ent. Soc. Lond. 1876, p. 132 [2].

Hab. Mexico, Tuxtla, Playa Vicente, Cordova (*Sallé*), Oaxaca (*Höge*), Ventanas 2000 feet (*Forrer*); Guatemala, San Gerónimo, Zapote (*Champion*); Panama, Bugaba, Volcan de Chiriqui to 4000 feet, Caldera 1200 feet (*Champion*).—South America [1] [2], widely distributed.

BRACHYDIRUS.

Brachydirus, Nordmann, Symbol. p. 131.
Staphylinus, Fam. III., Erichson, Gen. et Spec. Staph. p. 353.

This genus is characteristic of Tropical America, from whence we know about a dozen species. These insects Mr. Champion informs me are found in fungus. Although many of the species are very similar to one another, they are as a rule readily distinguished by the male characters, the ventral plate of the last segment being the seat of remarkable developments in the case of several species.

1. **Brachydirus terminalis.**

Gracilis, niger; antennis pedibusque anterioribus et intermediis fusco-testaceo variegatis, abdominis apice pallide testaceo, stylis ad apicem nigris; capite fortiter densissime punctato, elytris abdominisque segmentis 4° 5°que parce albido-pubescentibus.
Long. 12 millim.

Hab. Guatemala, Panima in Vera Paz (*Champion*).

Antennæ very short, the first seven joints testaceous but much infuscate, the terminal four quite pale, the basal joint as long as the three following together, fourth and fifth very small, sixth and following very strongly transverse. Head very coarsely punctate, the punctuation on the anterior half very dense, sparingly pubescent. Thorax

very coarsely and not closely punctured, the punctuation absent from the base and from a narrow space along the middle. Elytra a good deal longer than the thorax, each obliquely impressed and quite sparingly punctate. Hind body with the second segment quite impunctate, and the third nearly so, the three following quite sparingly punctured; the hind margin of the sixth and the whole of the seventh segment and also the terminal styles pale yellow, the latter black, however, at the extremity. Anterior legs with the coxæ dark, the femora yellow, the tibiæ infuscate yellow, darker behind than in front; middle legs nearly black, but the femora yellow above; hind legs black.

A single female only has been received; the species is not closely allied to any other.

2. **Brachydirus divisus.** (Tab. VIII. fig. 19.)

Gracilis, rufus; elytris abdomineque nigris, hoc ad apicem pallide testaceo, antennis pedibusque testaceis, elytris abdomineque parce sparsim albido-pubescentibus.
Long. 12 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ very short, joints seven to ten very strongly transverse. Head very densely punctate, the punctuation on the vertex more sparing. Thorax hardly so long as broad, quite sparingly punctate. Elytra longer than the thorax, sparingly punctate, and with a few black and grey hairs. Hind body slender, very sparingly punctate. The hind margin of the sixth and the whole of the seventh segment yellow; the anal styles also pale yellow, but orange-coloured at the extremity, and there ciliate with dark hairs.

The male has the terminal ventral plate much prolonged in the middle, the prolonged portion is deeply cleft and is somewhat compressed, so that the edges of the cleft are raised; the preceding plate is narrower in the middle than at the sides; the terminal styles are densely pubescent externally with black hairs.

Three specimens have been found; the male in bad preservation.

3. **Brachydirus gracilis.**

Gracilis, fulvo-testaceus; abdomine nigro, apice flavo-testaceo, stylis analibus ad apicem nigro-ciliatis, antennis pedibusque testaceis; prothorace abdomineque parce punctatis, hoc segmentis intermediis sparsim albido-pubescentibus.
Long. 12 millim.

Hab. Nicaragua, Chontales (*Belt*).

Antennæ short, joints seven to ten very strongly transverse. Head very densely punctate, rather sparingly pubescent, the vertex sparingly subobsoletely punctate. Thorax irregularly and only sparingly punctate. Elytra longer than the thorax, quite sparingly and not coarsely punctate. Hind body slender, second segment with two or three punctures on each side, third very sparingly punctate, and also the following segments with only scanty punctuation. The hind margin of the sixth and the whole of the seventh

segment flavescent, as are also the anal styles, these latter, however, orange-coloured at the extremity and much pubescent with black there and at the sides. The male has the hind margin of the under plate of the sixth segment very broadly, rather deeply emarginate, and the ventral plate of the seventh segment is produced in the middle so as to form a very long acuminate process, which is divided to its base by a very narrow, elongate slit; the margin of the slit is raised and furnished with a fine, not conspicuous, pallid pubescence.

Only one specimen has been found.

4. **Brachydirus solitarius.**

Gracilis, fulvo-testaceus; abdomine nigro, apice flavo-testaceo, stylis analibus ad apicem nigricantibus et nigro-ciliatis, antennis pedibusque testaceis, femoribus tibiisque posterioribus fuscis; abdomine minus parce punctato, segmento 4° transversim albido-pubescente.

Long. 11 millim.

Hab. NICARAGUA, Fort San Carlos (*Sallé*).

Very similar to *B. gracilis*, but abundantly distinct by numerous details. Head very densely (but not coarsely as in many other species) punctate in front, the punctuation on the vertex scanty and obsolete. Thorax coarsely but sparingly punctate. Elytra not impressed, rather sparingly punctate. Hind body black, the pale pubescence across the fourth segment conspicuous; fifth and sixth segments not sparingly punctate, the former with a few white hairs at the side.

In the male the hind margin of the under plate of the sixth ventral segment is broadly emarginate, and the following segment is produced in the middle, and the apex of the produced portion bears a short angular notch, the sides of this notch being densely pubescent.

Only one example has been received.

5. **Brachydirus championi.**

Fulvo-testaceus; abdomine nigro, apice flavo-testaceo, antennis pedibusque testaceis; elytris parce punctatis, abdominis segmentis 3° ad 5^{m} transversim albido-pubescentibus.

Long. 11 millim.

Hab. GUATEMALA, Zapote, San Isidro 1600 feet (*Champion*).

Antennæ very short, yellow, joints seven to ten strongly transverse. Head very densely punctured, sparingly pubescent. Thorax slightly broader than long, coarsely and sparingly punctate. Elytra quite sparingly punctate. Hind body black, with the second segment impunctate, bearing some white hairs on its lateral margin; third segment sparingly punctate and with scanty white pubescence, fourth and fifth rather more closely pubescent; sixth rather sparingly punctate, its hind margin broadly yellow; the following segment and the anal styles also of this colour, but the latter fuscescent and nigro-ciliate at the extremity. The male has a small notch at the tip

of the last ventral plate, and the hind margin of the preceding segment is slightly emarginate.

This species and *B. fungicola* are closely allied to *B. testaceus*, Fab., Er., but have the elytra much less closely punctate. The yellow cincture on the hind part of the sixth segment is a little broader in *B. championi* than in most of the allies.

6. **Brachydirus fungicola.** (Tab. VIII. fig. 20.)

Fulvo-testaceus; abdomine nigro, apice flavo-testaceo, antennis pedibusque testaceis, illis extrorsum fuscis; elytris parce punctatis, abdominis segmentis 4° et 5° transversim albido-pubescentibus.
Long. 11–13 millim.

Hab. PANAMA, Bugaba 800 to 1500 feet, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

This species is very closely allied to *B. championi*, but has the antennæ dark externally, and the hind body less punctate, the second and third segments being entirely without punctuation, and the yellow cincture of the hind margin of the sixth segment is narrower. The male characters are the same. A series of about a dozen individuals has been found of each species, and the above characters are quite constant. The unusually small amount of the punctuation of the hind body of *B. fungicola* greatly aids its recognition.

PLOCIOPTERUS.

Plociopterus, Kraatz, Ins. Deutsch. ii. p. 539.
Staphylinus, Fam. IV. Erichson, Gen. et Spec. Staph. p. 355.

This genus comprises about fifteen described species, and is confined to Tropical America. These insects are found in fungi, which, like their allies the *Brachydiri*, they no doubt frequent for predaceous purposes. In some species the males are scarcely distinguishable from the females by external peculiarities, but in others the male characters become extraordinary and conspicuous.

1. **Plociopterus fetialis.**

Staphylinus fetialis, Er. Gen. et Spec. Staph. p. 357[1].

Hab. MEXICO[1], Cordova (*Sallé*); PANAMA, Boquete 3500 feet (*Champion*).

The examples from Boquete (four in number) differ but slightly from the Mexican exponents; the male characters indeed appear identical.

2. **Plociopterus varipes.**

Niger; antennis (medio excepto), mandibulis, palpis, abdominis segmentis duobus ultimis pedibusque testaceis; tibiis intermediis et femoribus tibiisque posterioribus nigricantibus; elytris viridescentibus fasciis duabus cinereo-pubescentibus; abdomine parce punctato, segmentis medialibus parce cinereo-pubescentibus.
Long. 12–15 millim.

Hab. GUATEMALA, Capetillo, Zapote, Las Mercedes 3000 feet, San Isidro 1600 feet (*Champion*).

This insect is closely allied to *P. fetialis*, but is readily distinguished by the colour of the antennæ (of which the four basal and one apical joints are yellow) and of the parts of the mouth. The male has characters similar to those of *P. fetialis*, the front tarsi being simple, and the penultimate ventral plate bearing a fine pencil of long setæ, while the hind margin of the terminal segment is slightly emarginate.

Five examples have been found of this species.

3. **Plociopterus collaris.** (Tab. VIII. fig. 21.)

Niger; antennarum basi et apice, oris partibus, abdominis apice pedibusque testaceis, thorace rufo; elytris viridescentibus, fascia una basali aliaque apicali cinereo-pubescentibus.
Long. 14 millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

The antennæ have the four basal joints and the terminal joint pale. The head and thorax are coarsely and closely punctured, the former with a smooth space, the latter with a smooth line, along the middle. Elytra coarsely and closely punctate. Hind body rather sparingly punctate, the two terminal segments and anal styles yellow; the third and fourth segments with a scanty cinereous pubescence. The male has the front tarsi simple, a slender pencil of pubescence on the penultimate segment, and a very slight emargination of the apical segment.

Four individuals have been found. Though closely allied to *P. fetialis*, it is readily distinguished by the colour differences.

4. **Plociopterus lugubris.**

Niger; antennarum articulis duobus ultimis abdominisque apice testaceis; elytris cyaneis fasciis duabus cinereo-pubescentibus; abdomine parce punctato, segmento 3° parce cinereo-pubescente.
Long. 11–14 millim.

Hab. PANAMA, Caldera 1200 feet, Bugaba 800 to 1500 feet (*Champion*).

The mandibles and palpi are black, except that the terminal joint of the maxillary palpus is paler. The punctuation of the head is very coarse; that of the thorax is scanty and less coarse. The elytra are evenly, rather coarsely and only moderately closely punctate, and the punctuation of the hind body is but feeble and not close; the penultimate segment is not entirely yellow, but is more or less dark at the extreme base, especially on the underside; the anal styles are infuscate at the apex. The legs are entirely black, except that the tarsi become rufescent at their terminations; there is very little cinereous pubescence on the under surface. The male characters are very slight, and consist only of an inconspicuous emargination at the tip of the last ventral plate.

The species agrees in many respects with Erichson's description of *Staphylinus ornatus*, from Cayenne, but the discrepancies lead me to believe the two are distinct.

A small series was found at Caldera, and an extensive one at Bugaba.

5. **Plociopterus mollis.**

Niger; antennarum articulis tribus ultimis abdominisque apice pallide flavis, elytris cyaneis, fasciis duabus cinereo-pubescentibus; abdomine parce punctato, segmentis medialibus parce cinereo-pubescentibus.
Long. 15 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

The antennæ are black, with the exception of the very pale terminal three joints. The punctuation of the head is coarse, but leaves a large space along the middle smooth. The yellow colour at the apex of the hind body invades only the extremity of the penultimate segment, leaving it more than half black; the terminal styles are black behind. The male is only distinguished by a notch at the extremity of the last ventral plate.

The unique individual has the hind body and front and middle femora of a dilute piceous colour, probably due to its being very immature.

6. **Plociopterus histrio.**

Rufus; capite abdomineque nigricantibus, hoc apice flavo, antennis pedibusque testaceis, illis articulis 6°–9ᵐ fuscis.
Long. 12 millim.

Hab. NICARAGUA, Chontales (*Belt*).

In this species the fasciæ of pallid pubescence on the elytra are but little conspicuous, owing to the unusual colour (a sordid red) of the wing-cases. The head is very coarsely punctate, and the coarse punctuation of the thorax is rather close; the hind body is only quite sparingly and finely punctured. The male has beneath, on the middle of the penultimate segment, a single long bristle springing from a minute fovea, and the hind margin of the following segment is slightly notched; the front tarsi are simple.

Only two examples are extant.

7. **Plociopterus variegatus.** (Tab. VIII. fig. 22.)

Rufo-testaceus; pectore abdominisque summo basi et medio nigricantibus, elytris viridescentibus, fascia transversa sat conspicua cinereo-pubescente; antennis, palpis, pedibus abdominisque apice testaceis.
Long. 12 millim.

Hab. PANAMA, Bugaba 800 to 1500 feet (*Champion*).

The punctuation of the rather small head is coarse, but leaves a very large space on the middle smooth. The thorax is only sparingly punctured, with a broad space along

the middle quite free from punctures. The elytra are rather finely and not closely punctured. The basal segment of the hind body is blackish, as also is the fifth segment and the hind margin of the fourth, the intermediate space being reddish yellow; the whole of the two terminal segments is flavescent. The upper aspect of the hind body is very little punctate, except that in the female the penultimate segment is densely and very finely punctured.

In the male the last dorsal plate is bisinuate, so that it is trilobed, the middle lobe being the longest and broadest, and the outer projection, which is quite at the side, less conspicuous; the corresponding ventral plate bears a notch at the apex in the middle, and on each side of this the polished surface is somewhat hollowed; the terminal styles are distorted, broadly dilated behind, subfurcate, and with the infero-external portion much prolonged; the front tarsi are moderately dilated, and the tibiæ incrassate behind. The female has the front tarsi only very slightly dilated, and the last ventral plate is a little produced and acuminate in the middle.

A good series of examples has been obtained of this remarkable species. The figure is taken from a male example.

8. **Plociopterus belti.**

Rufo-testaceus; pectore, elytris abdomineque ante apicem fuscis; antennis, pedibus abdominisque apice testaceis, elytris ante apicem fascia transversa sat conspicua cinereo-pubescente.

Long. 13 millim.

Hab. NICARAGUA, Chontales (*Belt*).

The single female by which this species is represented appears to be very closely allied to *P. variegatus*, though the colour-differences are numerous; the punctuation is very similar in the two, and so also are the female characters, except that the last dorsal plate is more conspicuously produced and acuminate in the middle in *P. belti* and is foveate in front of the point. The antennæ are longer and more slender in the female of *P. belti* than is usual in other species of the genus, and the apices of the serrate joints 8–10 are swollen by some soft projection. The male characters will no doubt prove to be very remarkable.

PHILOTHALPUS.

Philothalpus, Kraatz, Ins. Deutsch. ii. p. 540.
Staphylinus, Fam. IX., Erichson, Gen. et. Spec. Staph. p. 395.

This genus, like all the allies, is peculiar to the warmer parts of America. After abstraction of the species I have assigned to *Styngetus*, it includes seven or eight others in addition to those here enumerated.

1. **Philothalpus fasciatus.**

Philonthus fasciatus, Nordm. Symbol. p. 112 [1].
Staphylinus fasciatus, Er. Gen. et Spec. Staph. p. 397 [2].

Hab. Mexico [1 2], Cordova (*Sallé*), Jalapa (*Flohr*).

2. **Philothalpus segmentarius.**

Staphylinus segmentarius, Er. Gen. et Spec. Staph. p. 397 [1].

Hab. Guatemala, El Jicaro in Vera Paz (*Champion*); Panama, Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 3000 feet, David (*Champion*).—South America, Colombia [1].

Mr. Champion obtained a series of fifteen examples at Bugaba; they show that the species is very variable in the colour of the thorax and elytra. The thorax is occasionally of a dull red colour, and sometimes is of a dark dull æneous colour, the transition occurring by a red thorax bimaculate with the darker colour; the elytra are most frequently reddish brown, but they become more or less suffused with a dusky æneous tint, so that some individuals have them of a fuscous-brassy colour. The punctuation and pubescence remain without variation, and the hind body shows less variation in colour than the parts before it.

From each of the other localities there is only a single exponent; and the Guatemalan individual is the most extreme variety obtained, its colour being very dark. I have not seen any Colombian example of the species.

3. **Philothalpus difficilis.** (Tab. VIII. fig. 23.)

Rufescens; capite thoraceque ænescentibus, opacis, antennis (basi excepto) nigricantibus, abdominis segmentis tribus ultimis nigro-fasciatis, palpis pedibusque testaceis.
Var. Elytris, pectore abdominisque basi fuscescentibus.
Long. 11 millim.

Hab. Guatemala, San Isidro 1600 feet, El Tumbador 2500 feet, Mirandilla 1700 feet (*Champion*); Nicaragua, Chontales (*Janson*).

This species is extremely closely allied to the two preceding, but has no trace of flavescent pubescence on the extremity of the elytra. The scutellum is of an obscure red colour, and the elytra are slightly shorter than in *P. fasciatus*. The sexual characters are the same.

Of a series of fifteen examples from Guatemala, one belongs to the dark variety, the others are all similar. From Chontales only one example has been obtained.

4. **Philothalpus debilis.**

Rufus; capite thoraceque superne æneis nitidis, hoc anterius rufo-signato, mesosterno scutelloque fuscis; abdo-

mine nigro, segmentis singulis testaceo-marginatis, segmento 7° ex parte majore testaceo; pedibus testaceis, antennis rufo-obscuris basi dilutiore.
Long. 10 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ with the three or four joints pale red, the others darker. Head and thorax shining brassy, coarsely punctate, the former with the disk broadly smooth, the latter with a smooth space along the middle. Scutellum and elytra densely punctate. Hind body very densely and finely punctate; segments 2–6 with the hind margins yellow, that of the sixth more broadly than the others; seventh yellow, marked with black at the extremity; anal styles yellow at the base, black at the extremity.

This insect is very similar in most respects to the smaller individuals of *P. segmentarius*, but is readily distinguished by the shining head and thorax and the densely punctured elytra and hind body. Only three individuals have been found; the sexual characters are apparently the same as in *P. segmentarius*.

5. **Philothalpus nigriventris.**

Niger; capite thoraceque superne æneis nitidis, elytris nigro-æneis, abdomine ante apicem testaceo-cingulato, palpis antennisque piceis, tarsis testaceis; capite thoraceque fortiter punctatis, abdomine crebrius subtiliter punctato.
Long. 11 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ rather elongate, even the tenth joint being evidently longer than broad, blackish at the base, rather paler at the apex. Mandibles reddish. Head shining brassy, with a few coarse punctures on the middle in front, behind these with a curved transverse series, and with other punctures at the margins of the eyes, hind angles, and vertex. Thorax also shining brassy, and rather coarsely punctate, and with a rather broad line along the middle impunctate. Thorax rather longer than the elytra, rather closely and not finely punctate. Hind body black, with a narrow margin at the extremity of the sixth segment, and with the base of the seventh segment yellow. Legs blackish, the base of the tibiæ paler, the tarsi sordid yellow.

This, again, is closely allied to *P. segmentarius*, but is distinguished by good characters of colour and punctuation. Only two specimens have been found; and the sexual peculiarities are much as in *P. segmentarius*.

6. **Philothalpus pectoralis.**

Niger; capite thoraceque superne æneis, nitidis, elytris pectoreque rufis, pedibus testaceis; capite thoraceque fortiter punctatis, abdomine dense subtiliter punctato.
Long. 12 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ as long as head and thorax, black; palpi blackish, with the terminal joints

rufescent; mandibles piceous; head with a smooth space on the disk, and thorax with a rather broad line along the middle smooth. Elytra of a tawny-red colour, evenly and closely, somewhat finely punctate. Hind body acuminate behind, black, with only the hind margin of the penultimate segment narrowly yellow.

Only a single specimen has been found; it is a female, and has the front tarsi distinctly dilated. The species is another close ally of *P. segmentarius*.

7. **Philothalpus prolixus.** (Tab. VIII. fig. 24.)

Niger, parum nitidus; abdominis segmentis duobus ultimis rufis, femoribus picescentibus, elytris cyaneis; prothorace crebrius fortiter punctato, medio linea longitudinali lævigata; abdomine dense punctato.
Long. 13 millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Antennæ black, obscurely picescent at the extremity, elongate, the penultimate joints each considerably longer than broad; mandibles dark red, palpi piceous. Head very coarsely punctate, with only a small space on the middle smooth. Thorax evenly, rather coarsely and closely punctate, the smooth space along the middle broader in front and at the base than it is a little distance in front of the base. Elytra greenish blue, slightly longer than the thorax, rather closely and coarsely punctate, with a conspicuous black pubescence. Hind body closely and evenly punctate, black, with the hind margin of the fifth and the whole of the sixth segment reddish yellow; terminal segment and anal styles yellow, the latter brownish at the extremity. The legs are nearly black, the femora being of a very dark obscure red, and the tarsi paler, their terminal joint being red, the anterior tarsi infuscate red. The male has a broad emargination at the tip of the last ventral plate, and its front tarsi are much dilated, while in the other sex they are only slightly so.

Eight individuals have been found.

8. **Philothalpus mexicanus.**

Niger, parum nitidus; abdominis segmento ultimo penultimique margine posteriore rufis, femoribus picescentibus, elytris cyaneis; prothorace crebrius punctato, medio linea longitudinali lævigata; abdomine dense punctato.
Long. 12 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cubilguitz in Vera Paz (*Champion*).

This is extremely similar to *P. prolixus*, but is readily distinguished by the smaller extent of the red colour of the extremity; the thorax is a little more finely punctate.

I have seen only four individuals, possessing sexual characters similar to *P. prolixus*.

9. **Philothalpus tinctiventris.**

Niger, parum nitidus; abdomine rufescente, apicem versus dilutiore, basi nigro; femoribus picescentibus, elytris cyaneis; prothorace crebrius punctato, medio linea longitudinali lævigata; abdomine dense punctato.
Long. 11 millim.

Hab. GUATEMALA, Zapote (*Champion*).

Distinguished from the two preceding species by the colour of the hind body, which is red suffused with black, so that the two basal segments are quite black, the others becoming more rufescent behind, so that the apex is pale red.

Two female individuals only have been found.

10. **Philothalpus subtilis.**

Niger, parum nitidus; pedibus piceis, elytris viridi-cyaneis; prothorace subtiliter sat crebre punctato, medio linea longitudinali lævigata; abdomine densius subtiliusque punctato.
Long. 12 millim.

Hab. MEXICO, Cuernavaca (*Sallé*), Mirador (*Höge*).

This is another very closely allied species, but has the punctuation throughout finer than in any other of the immediate allies of *P. prolixus*. At the base of the hind body three segments are very distinctly transversely impressed, while in the other species only two are so.

I have seen four individuals, in bad preservation. The characters of the sexes are the same as in *P. prolixus*.

11. **Philothalpus chiriquensis.**

Niger, parum nitidus; elytris cyaneis; prothorace crebrius fortiter punctato, medio linea longitudinali lævigata; abdomine dense punctato.
Long. 13 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

So far as I can judge from a single female, the only character of importance by which this is distinguished from *P. prolixus* is the entirely black hind body.

12. **Philothalpus philonthiformis.** (Tab. VIII. fig. 25.)

Niger, parum nitidus; capite, thorace elytrisque nigro-æneis; prothorace crebre fortiter punctato, medio linea longitudinali lævigata; abdomine dense punctato.
Long. 12–13 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Though very closely allied to *P. prolixus*, the colour-differences readily distinguish this insect; it has, moreover, the thoracic punctuation less dense. There is not the least trace of any transverse impression on the fourth segment of the hind body, and even that on the (true) third segment is incomplete.

A pair of this species, showing similar sexual characters to *P. prolixus*, is all that has been found.

13. **Philothalpus pæderiformis.** (Tab. IX. fig. 1.)

Rufus; capite abdominisque summo apice nigris, elytris viridi-cyaneis, pectore et antennis fuscis; capite thoraceque crebre subtiliter punctatis, hoc linea longitudinali impunctata parum discreta; elytris abdomineque dense subtiliter punctatis.
Long. 13 millim.

Hab. Mexico, Cuernavaca (*Sallé*).

Antennæ elongate and slender, deeply infuscate red. Head with rather numerous, somewhat fine, evenly distributed punctures, leaving only a small space on the middle free. Thorax punctured rather more finely than the head; terminal segment of hind body blackish, with the base red; anal styles also black. Breast infuscate.

A single pair only is known. The male has only a very slight emargination of the apical segment; but the front tarsi are broader than in the female.

GASTRISUS.

Gastrisus, Sharp, Trans. Ent. Soc. Lond. 1876, p. 136.

This genus has hitherto consisted of three Amazonian species. The two species I now add differ from the type of the genus by the more slender and elongate terminal joint of the labial palpi; and they have quite a different appearance from either of the previously described forms.

1. **Gastrisus opaculus.** (Tab. IX. fig. 2.)

Fusco-æneus, parum punctatus, opacus; abdomine apice sordide rufo-testaceo, pedibus antennisque fuscis.
Long. 17 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Antennæ very obscure red, scarcely thicker towards the apex, but with joints 7–10 rather shorter than broad; clypeal membrane large. Head with punctures along the inner margins of the eyes and at the hind angles, and with two longitudinal series converging towards the front of the clypeus. Thorax near the front margin with a series of three distant punctures on each side, and with a few punctures between these and the front angles. Elytra very dull, with very distant and quite obsolete punctures. Hind body finely and evenly, not closely, punctate; the hind margin of the sixth segment, the whole of the seventh, and the anal styles rather obscure reddish yellow. Legs very obscure red, with the tibiæ darker, the spines of the middle tibiæ numerous and elongate.

A series of six examples has been found. The male has a very shallow emargination at the tip of the last ventral plate, and its front feet are a little broader than they are in the female.

2. **Gastrisus mimetes.**

Niger, subopacus; capite thoraceque fusco-subæneis, abdominis segmentis duobus ultimis rufis; elytris punctis distantibus, parum conspicue impressis.
Long. 17 millim.

Hab. Costa Rica (*Van Patten*).

This species will be readily enough distinguished from *G. opaculus* by the rather coarser punctuation and by the two red apical segments. It possesses a great superficial resemblance to *Lampropygus cognatus*; and as the second dorsal plate has a well-marked transverse line impressed on it near the base, it really approaches that insect in the generic character. There is also a shorter and more obscure line on the third plate: these impressions are, however, very imperfect compared with what exists in *L. cognatus*, and apart from them the species may be readily distinguished from *L. cognatus* by the duller anterior parts and the much less punctuation on the head, thorax, and elytra.

Only a single specimen has been found; it is a male, and has a slight notch at the hind margin of the last ventral plate.

ISANOPUS.

Isanopus, Sharp, Trans. Ent. Soc. Lond. 1876, p. 141.

This genus has hitherto comprised a single Amazonian species, which, like the *I. sallæi* here described, is known only by a single example.

1. **Isanopus sallæi.** (Tab. IX. fig. 3.)

Gracilis, niger; antennis rufo-fuscis basi nigricante, elytris cyaneis, abdominis segmentis duobus ultimis rufo-testaceis; prothorace sparsim punctato, medio area longitudinali lata irregulari impunctata.
Long. 17 millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ very elongate, reaching to about the extremity of the elytra. Head coarsely punctate on either side, and with four or five punctures on the anterior part of the smooth middle space. Thorax longer than broad, narrowed behind. Scutellum black, with numerous coarse punctures. Elytra as long as the thorax, of a dark blue colour, coarsely punctate. Hind body slender, black, with slight iridescent reflections; the two apical segments and anal styles yellow, moderately closely and finely punctate. Legs black, the tarsi paler, rufescent at the extremity.

The only individual known is a male. The front tarsi are greatly dilated, the last ventral segment has a rather deep notch at the tip, and the hind margin of the preceding segment is a little emarginate.

The middle and hind feet are not very exactly rendered in the figure.

STYNGETUS.

Palpi omnes elongati, tenues; ligula integra; mandibulæ elongatæ, pone medium dentatæ. Tarsi anteriores in utroque sexu simplices. Abdomen segmentis tribus basalibus linea curvata profunda impressis.

This genus will comprise certain species placed by Erichson in the genus *Philonthus*, viz. *P. egregius*, *P. fervidus*, and *P. viduus*, and referred by Kraatz (who, however, was imperfectly acquainted with them) to *Philothalpus*. They differ from this latter genus by the front tarsi being simple in each sex and destitute of fine pubescence beneath, and by the elongate trophi. They have a different appearance from the species of *Philothalpus*, so that Erichson, as stated above, referred the species known to him to the genus *Philonthus*, while the *Philothalpi* were placed by him as a section of *Staphylinus*. All the species of *Styngetus* known to me possess in their males a very peculiar character, viz. that the upper hinder margin of their posterior femora is crenulate.

So far as I at present know, the genus is peculiar to Central America and the parts of South America north of the Amazons basin. *Philonthus cupripennis* and *P. antennatus*, Guérin-Mén., belong to it.

1. **Styngetus deyrollei.**

Philothalpus deyrollei, Solsky, Hor. Soc. Ent. Ross. iv. p. 105[1]; id. v. p. 141[2].

Hab. Mexico[1 2], Cordova, Toxpam, Yolos (*Sallé*), Jalapa (*Flohr*), Mirador (*Höge*).

2. **Styngetus viduus,** var. (Tab. IX. fig. 4.)

Philonthus viduus, Er. Gen. et Spec. Staph. p. 506[1].

Hab. South America, Colombia[1].

Var. Abdominis segmento ultimo toto albido.

Hab. Panama, Volcan de Chiriqui, 4000 to 6000 feet (*Champion*).

The individuals obtained by Mr. Champion differ only very slightly from Colombian examples, except as regards the very definitely pallid colour of the terminal segment; and I have therefore treated them as being merely a variety, though the colour is quite similar in the six specimens obtained, one of which is figured.

3. **Styngetus flavicaudus.**

Niger; thorace subviolaceo, elytris violaceo-aureis, abdominis segmento ultimo flavo; abdomine parce punctato.

Long. 15 millim.

Hab. Guatemala, Balheu in Vera Paz (*Champion*).

This insect is very closely allied to *P. deyrollei*; but the thorax has a violaceous tint, the hind body is more sparingly punctate, and the penultimate segment is entirely

black. *S. cupripennis*, Guér.-Mén., is also very closely allied, but is larger, has a black thorax, a larger head, and more closely punctured head and thorax.

Only two individuals have been obtained of *S. flavicaudus*; they are males. The femoral crenulation is very coarse, and does not extend quite to the apex; the terminal ventral plate is very slightly emarginate.

4. **Styngetus championi.**

Niger; thorace vix subviolaceo-micante, elytris violaceo-æneis; prothorace ad latera crebre fortius punctato, area lata longitudinali lævigata; abdomine subtiliter minus sparsim punctato.
Long. 16 millim.

Hab. GUATEMALA, San Gerónimo, Sabo, Cubilguitz and Balheu in Vera Paz (*Champion*).

This species is very closely allied to *S. flavicaudus*; but it has the hind body uniformly deep black and a little less scantily punctate. Although excessively similar to *S. deyrollei*, it is readily distinguished by the concolorous hind body. The male characters are the same as in *S. flavicaudus*.

The species appears to be somewhat rare, as only five individuals have been obtained.

5. **Styngetus anticus.** (Tab. IX. fig. 5.)

Niger; capite thoraceque vivide violaceo-cyaneis, elytris aureo-violaceis; abdomine parce punctato.
Long. 13–15 millim.

Hab. COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Volcan de Chiriqui between 4000 and 6000 feet (*Champion*).

This is, again, very closely allied to *S. deyrollei*, but the extremely beautiful colour of the head and thorax very readily distinguish it from all the allies. This character appears to be invariable in the series of twelve examples before me. In the male the crenulation of the hind femora extends to the extremity, and there is a rather distinct emargination of the last ventral plate.

The figure is drawn from one of the Chiriqui females.

OCYOLINUS.

Palpi omnes elongati, tenues; ligula integra; mandibulæ valde elongatæ, pone medium dente magno instructæ, apice tenui curvato. Tarsi anteriores in utroque sexu dilatati, subtus spongiosi. Abdominis segmenta basalia absque lineis impressis curvatis.

This genus is distinguished very well by the above combination of characters, and will comprise, in addition to *O. amethystinus*, two or three other undescribed species from Northern South America; the characters of the genus are taken, indeed, from

the Venezuelan *O. rugatus* *, the fragmentary condition of the unique individual of *O. amethystinus* rendering it unfit for bearing much manipulation, but it appears to be quite congeneric with *O. rugatus*.

1. **Ocyolinus amethystinus.** (Tab. IX. fig. 6.)

Niger; capite, thorace elytrisque violaceis, nitidis, antennis dimidio externo albido; thorace disco quadripunctato; elytris fortius punctatis.
Long. 20 millim.

Hab. Costa Rica (*Van Patten*).

Antennæ very slender, with the five terminal joints very pale yellow. Head with two large punctures on each side between the eyes, placed so as to form a transverse series, the vertex punctate all across, and with a very large puncture on each side behind the internal one of the transverse series. Thorax a good deal narrowed behind, with four punctures in front of the middle, two on each side, and outside each anterior puncture with another more indistinct. Elytra very coarsely punctate, about as long as the thorax. Hind body closely and finely punctate.

The unique individual I believe to be a female. Though in a very fragmentary condition I have succeeded in restoring it sufficiently for representation; the mandibles should be rather more elongate, curvate, and slender than they are shown to be in the figure.

PHANOLINUS.

Trigonophorus, ex parte, Kraatz, Ins. Deutsch. ii. p. 541.

Palpi omnes elongati, graciles, articulo terminali quam penultimus longiore; mandibulæ mediocriter elongatæ; ligula medio parum prominula, vix emarginata, apice tantum canaliculato. Prothorax absque membrana stigmatica. Tarsi anteriores in utroque sexu maxime dilatati. Abdomen absque lineis curvatis discretis in segmenta basalia.

The insects hitherto composing this genus have been, since Kraatz (*op. cit.*) rearranged the genera of Staphylinini, provisionally located in *Trigonophorus* (*Trigonopselaphus* of the Munich Catalogue of Coleoptera), while other species unknown to Kraatz have remained in *Philonthus*. The genus being abundantly distinguished from all the other Xanthopygina by the above characters may now be formally established with advantage. In addition to the species here enumerated it will comprise *Philonthus pretiosus*, Er.,

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* **Ocyolinus rugatus,** n. sp.

Niger; capite, thorace elytrisque viridescentibus; antennis, mandibulis palpisque rufo-fuscis; capite thoraceque fortiter punctatis, grosseque transversim rugosis, absque areis lævigatis; elytris crebre fortiter punctatis; abdomine crebrius subtiliter punctato.
Long. 19 millim.

Hab. Venezuela.

P. amœnus, *P. cyanescens*, and *P. cupreus*, Guérin-Mén., and *Trigonopselaphus violaceus* and *T. venustus*, Shp. The insects of this genus are all remarkable for the brilliancy and beauty of their colours; but the species are very closely allied and form a most difficult study. In certain of them the impressed lines on the basal dorsal segments, which when well developed are considered of generic importance in the Xanthopygina, exist in a rudimentary state, and appear to me to offer great assistance in discriminating the species. The genus is confined to Tropical America, and has its headquarters in the northern and north-western portions of South America. Mr. Buckley informed me that a very brilliant species he brought from Ecuador was common under dried dung; Mr. Champion found most of the few individuals he met with on the wing, I believe; and Mr. Flohr finds a species amongst moss and dead leaves, so that it would appear that the habits of these lovely creatures are somewhat varied. It is impossible in the Plate to do justice to their polished and brilliant metallic colours.

1. **Phanolinus obsoletus.**

Minor, fulgidus, auratus; elytris, pedibus antennisque basi purpureo-metallicis, antennis extrorsum tarsisque fuscis; thorace seriebus dorsalibus parum punctatis, punctis lateralibus perpaucis; abdomine parce punctato, segmentis 2°–4^{m} profunde transversim impressis.
Long. 18 millim.

Hab. Mexico (*ex coll. Guérin-Ménéville*).

This insect has, compared with most of its congeners, but little punctuation on the head and thorax. The palpi are rufescent at the extremity; the distant punctures on the head and thorax are coarse; the thoracic series of punctures on each side consists of about six, with two or three others nearly intercalated; there are also a few irregularly placed punctures near the front on each side, but the posterior parts are destitute of punctures except at the margins.

Although closely allied to *P. flohri*, I am inclined to think this may be a distinct species, the punctuation of the elytra and hind body being not quite so effaced, and the tarsi and terminal joints of the palpi are paler. The unique individual is a male, and has a broad shallow notch at the extremity of the last ventral plate.

2. **Phanolinus flohri.** (Tab. IX. fig. 7.)

Cupreo-auratus, fulgidus; elytris purpureo-metallicis, antennarum basi pedibusque nigro-cyaneis, antennis extrorsum tarsisque nigro-fuscis; thorace perparum punctato; elytris obsolete punctatis; abdomine parce obsoleteque punctato, segmentis 2°–4^{m} transversim impressis.
Long. 21 millim.

Hab. Mexico, Jalapa, Almolonga (*Flohr*).

The punctures on the head are very distant and not numerous, moderately coarse. The palpi are piceous; the punctures of the thoracic series are only four or five in number, and besides this there are only five or six other punctures on each side near

the front, except those contiguous to the margins. The punctuation on the wing-cases is unusually fine and distant, as is also that on the hind body.

The species is described from a single female individual sent to me by Mr. Flohr, in recognition of whose exertions I have named it; he informs me that it is only occasionally met with amongst moss and leaves in the forests.

3. **Phanolinus divisus.**

Capite thoraceque æneo-auratis, fulgidis, fortiter parce punctatis; elytris nigro-cyaneis fortiter punctatis; scutello abdomineque æneis minus nitidis; antennarum articulo primo pedibusque nigro-viridescentibus, tarsis nigris; abdominis segmentis 2°–4ᵐ transversim impressis.
Long. 20 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Head with very coarse punctures, those behind the eyes numerous. Thorax with the serial punctures rather distant, all coarse, and with distant coarse punctures at the sides both at the base and in front. The hind body is of a brassy colour, not brilliant, moderately closely punctate.

Although extremely similar to the less fulgid examples of *P. godmani*, the present species may be distinguished by the more definite transverse impressions on the basal segments of the hind body. I have seen only a single female example.

4. **Phanolinus gravidus.**

Violaceus; capite thoraceque nitidis, illo minus crebre punctato, hoc seriebus dorsalibus irregularibus circiter 9-punctatis, lateribus parce punctatis; elytris fortiter punctatis; abdomine viridi-nigro parum nitido, segmentis dorsalibus secundo et tertio parum discrete transversim impressis.
Long. 21 millim.

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*).

Readily distinguished by its colour from the other species with linear transverse impressions on basal segments of the hind body, and also by the rather more numerous punctures on the thorax. Independently of colour, the lines of the basal segments will distinguish it from all varieties of *P. godmani*.

Only a single female has been found.

5. **Phanolinus pollens.**

Viridescens, subnitidus; capite parce punctato; thorace seriebus dorsalibus circiter 9-punctatis, lateribus perparum punctatis; scutello opaco nigricante; elytris fortiter punctatis; abdomine parce punctato, segmentis dorsalibus secundo et tertio basi transversim impressis.
Long. 24 millim.

Hab. NICARAGUA, Chontales (*Belt*).

This is readily distinguished by its broad form and less shining surface. The thorax is much narrowed behind, but scarcely at all sinuate at the sides. The head has only

a very few punctures, and these are not coarse, and the four quadrately disposed punctures are placed nearly on the middle, very far from the front margin; the thorax, besides the discoidal series, has only six or seven fine punctures on each side. The impressions at the base of the first two segments of the hind body, though rather short, are definite, being limited in front by a distinct elevation of the surface. The emargination at the tip of the last ventral plate in the male, though broad, is very slight, but in front of it there is a smooth space, and in front of that a greater concentration of the pubescence; the hind margin of the preceding segment is a little emarginate.

I have seen only one specimen.

6. **Phanolinus auratus.**

Auratus, fulgidus; elytris viridescentibus, pedibus antennarumque basi nigro-viridibus, antennis extrorsum tarsisque nigris; capite thoraceque sparsim subtiliter punctatis, elytris crebre fortiter punctatis; abdomine ubique nitido.

Long. 24 millim.

Hab. GUATEMALA, Purula in Vera Paz (*Champion*).

Rather larger, broader, and flatter than the allies, and with the scanty punctuation on the head and thorax finer than usual, especially on the anterior parts. Near the front of the head in the middle there are a few irregularly disposed fine punctures; the thoracic series consists of about twelve punctures on each side, and the lateral punctures are not numerous. The hind body is very shining, and has no definite opaque portions.

Two female examples, agreeing pretty closely, have been found.

7. **Phanolinus godmani.** (Tab. IX. fig. 8.)

Fulgidus; capite thoraceque metallico-viridibus, parce fortiter punctatis; elytris læte cyaneis, crebre fortiter punctatis; abdomine aureo-viridi, subtiliter punctato; antennarum basi pedibusque nigro-viridibus, antennis extrorsum tarsisque nigris.

Long. 18–20 millim.

Hab. PANAMA, Volcan de Chiriqui at various elevations below 6000 feet (*Champion*).

Var. Capite thoraceque violaceis, elytris viridescentibus.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

The punctures of the head are only moderately numerous, but are coarse. The thoracic series consists of about nine coarse punctures, and there are several very coarse punctures at the sides. Both the head and thorax are extremely brilliant. The elytra are of a beautiful blue colour and also are shining. The scutellum agrees in colour with the anterior parts rather than with the elytra. The hind body is shining, but at the extreme base of each segment there is a distinct opacity. There are no transverse impressed lines on the basal segments. The male has a shallow, very broad emargination at the apex of the last ventral plate.

Five individuals have been found, apparently all at different spots; although by no means agreeing absolutely in the shades of colour, the above description applies to each of them. Of the variety from Guatemala only one example has been obtained; and although it differs markedly in colour (resembling in this respect *P. gravidus*), there are not sufficient distinctions in other respects to warrant its being considered distinct at present.

8. **Phanolinus longulus.**

Nigro-viridulus; capite thoraceque viridibus fulgidis, crebre punctatis, hoc seriebus dorsalibus circiter 15-punctatis; abdomine subtiliter punctato.
Long. 23 millim.

Hab. NICARAGUA, Chontales (*Belt*).

This unique female I am unable to assign either to *P. godmani* or to *P. punctatus*, to each of which it has much resemblance. The punctuation on the hinder portion of the head is numerous, and there are four fine quadrately disposed punctures near the front margin in the middle. The punctures of the thoracic series are more numerous than in any other of the species; and the lateral punctures are numerous and extend from the front to the base, leaving, however, the dorsal series evidently distinct. The hind body is but little shining.

9. **Phanolinus punctatus.**

Violaceo-viridis, sat nitidus; capite thoraceque crebrius punctatis, hoc medio area longitudinali lævigata; abdomine crebrius punctato.
Long. 21 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This species is readily distinguished from others by the closer punctuation, so that on the thorax the dorsal series are not distinct from the lateral punctuation.

Only two specimens have been obtained. The male has a broad, but not deep, emargination on the last ventral plate.

10. **Phanolinus speciosus.** (Tab. IX. fig. 9.)

Violaceus, minus nitidus; antennis extrorsum tarsisque nigris; capite thoraceque crebre punctatis; elytris profunde punctatis.
Long. 22 millim.

Hab. MEXICO, Cordova (*Sallé*).

The uniform and beautiful violet-blue colour, and the surface less metallic and fulgid than usual, render this easily recognized; and it has the punctuation of the elytra rather deeper and coarser than in the other forms. The hind body is very little

shining; a small space on the middle of each segment is all that is brilliant. The male has a deep notch at the tip of the last ventral plate.

Sallé's collection contained a nice pair of this lovely insect; the male is figured.

11. **Phanolinus discedens.** (Tab. IX. fig. 10.)

Capite thoraceque aureo-æneis, parum punctatis, hoc seriebus discoidalibus tantum tripunctatis; elytris læte viridibus, fortiter punctatis; abdomine impunctato, ex parte majore opaco, nigricante, apice flavo; antennis pedibusque testaceis.

Long. 13 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ rather slender, not thicker externally; the tenth joint about as long as broad. Mandibles short, red, like the other parts of the mouth. Head short and broad, the eyes occupying nearly all the side, the vertex with some coarse punctures, and three or four punctures touching the inner margin of the eye. Thorax subquadrate, the discoidal series reduced to two or three punctures on each side near the front margin, a puncture on each side near the front angle, and with a very few punctures touching the margins; otherwise impunctate. Elytra very shining, with very coarse, remarkably distinct punctures. Hind body with the basal portion of each segment dull, the hinder part shining, the terminal segment yellow, the preceding one red largely marked with black on the middle; anal styles yellow, a little darker towards the extremity. The whole of the hind body remarkably free from punctuation, no trace of which can be detected on the basal segments, and only a very few indistinct punctures on the apical ones.

Of this species a single individual, apparently a female, has been found; it will probably form a distinct genus, and appears to have relations with different genera of the Xanthopygina. At present it is systematically least misplaced in *Phanolinus*, from which it differs by the shorter and stouter trophi. The facies is rather that of *Gastrisus* and *Xanthopygus*, in neither of which, however, can it be placed, owing to the entire absence of a stigmatic membrane.

NAUSICOTUS.

Palporum maxillarum articulus ultimus præcedente longior; palpi labiales articulis duobus basalibus brevibus, tertio oblongo, leviter incrassato, apice truncato, quam precedentes simul sumtis longiore; mandibulæ elongatæ. Tarsi anteriores dilatati, subtus spongiosi; prothorax membrana stigmatica instructus.

This genus appears to be most nearly allied to *Phanolinus*, from which, however, it is distinct by the structure of the labial palpi and the presence of a stigmatic membrane; this latter has only a very short extension inwards. As in certain species of *Phanolinus*, there are rudimentary curved impressions on the second and third dorsal plates of the hind body. The ligula, though acuminate in front, has the apex rather deeply divided. The structure of the labial palpi readily distinguishes the genus from *Gastrisus*, to the species of which genus it is, moreover, very dissimilar in appearance.

Trigonopselaphus opacipennis, Shp., and one or two undescribed South-American species, belong to the genus.

1. **Nausicotus spectabilis.** (Tab. IX. fig. 11.)

Capite thoraceque aureo-purpureis, fulgidis ; elytris, pectore abdomineque fusco-nigris, opacis, hoc segmento ultimo pedibusque testaceis ; antennis rufo-obscuris, dimidio apicali pallide testaceo.
Long. 22 millim.

Hab. NICARAGUA, Chontales (*Belt*).

Antennæ not elongate, and but little thickened externally; the two or three penultimate joints rather broader than long. Palpi and parts of the mouth flavescent. Head with numerous punctures near the inner margins of the eyes, densely punctured behind, and with four or five punctures near the front in the middle. Thorax rather longer than broad, on each side of the middle with a longitudinal series of about eight distant punctures, with punctuation near the front and lateral margins, but with very few punctures between these and the discoidal series. Elytra very opaque, with very obsolete punctuation, rather closely pubescent. Hind body closely and very finely punctured, very dull, the apical segment pale yellow ; the extreme hind margin of the preceding segment is also of this colour, and so are the anal styles, the latter, however, are fuscescent behind, but their terminal pubescence is yellow. The legs are yellow, with distinct black spinules. The unique individual is a male, and has a broad, very shallow notch on the last ventral plate.

GLENUS.

Glenus, Kraatz, Ins. Deutsch. ii. p. 542.
Staphylinus, Fam. VIII., pars, Er. Gen. et Spec. Staph.

This is one of the most distinctive of the genera of South-American Staphylinidæ. It is not found out of Tropical America, nor has it anywhere, so far as we know, any near ally. The species found in our region are both much inferior to the South-American forms in the stature of their individuals, and are apparently of great rarity. I had not anticipated the extension of this genus to Mexico previous to Mr. Flohr's discovery of a species there.

1. **Glenus coxalis.**

Glenus coxalis, Sharp, Trans. Ent. Soc. Lond. 1876, p. 425.

Hab. PANAMA (*Henry Edwards*).

2. **Glenus flohri.** (Tab. IX. fig. 12.)

Rufo-fulvus ; thorace rufo-aureo, scutello nigro, abdomine nigro-variegato ; capite thoraceque densius fortiter punctatis, cumque elytris fulvo-pubescentibus ; thorace linea lata in medio lævigata.
Long. 15 millim.

Hab. MEXICO, Jalapa (*Flohr*) ; GUATEMALA, near the city (*Champion*).

Head with a slight metallic tint, very closely punctured all over. Thorax coarsely and densely punctured, but with a broad straight line down the middle smooth. Elytra short and broad, without definite punctuation. Hind body red, with the segments each broadly marked with black on the middle and at the sides, but the seventh segment entirely yellow, and the anal styles yellow, a little infuscate at the extremity.

The male has the posterior lobe of the hind coxa with an increased extension externally; the posterior external angle is, however, only rectangular, not at all spinose. The apical ventral plate has a very broad, curved (not angular) emargination in the middle behind.

I have seen only a single Mexican example, from which the pubescence is unfortunately in great part removed. The unique example found by Mr. Champion in Guatemala may possibly prove to be a very closely allied but distinct species, as the peculiar extension of the hind coxa is greater, and its posterior external angle is somewhat produced and spinose. This specimen has a rather broader head, and more metallic head and thorax, so that I am in doubt whether it be a better developed male variety of *G. flohri* or a very closely allied species. The figure is taken from this individual.

Group **STAPHYLININA.**

Superior line of the prothorax deflexed to the under surface at the front angle; inferior line not continued on to the front aspect of the thorax, and usually united with the superior line behind the prosternum.

CREOPHILUS.

Creophilus, Mannerheim, Brachel. p. 20.
Staphylinus, Fam. II., Er. Gen. et Spec. Staph. p. 347.
Emus, pars, Fauvel, Faune Gall.-rhen. iii. p. 394.

This genus consists of eight or nine species, six of which are confined to the antipodes and New Guinea, a seventh is found in South America, the eighth being very widely distributed in the eastern hemisphere and occurring in a slightly modified form in our region, to which it is probably a comparatively modern immigrant, that may well have arrived by way of Kamtschatka and Alaska. Fauvel's union of the genus with the European *Emus* is not a correct step, the differences in the prothorax being of much importance, and corroborated by other minor distinctions.

1. **Creophilus maxillosus,** var. **villosus.**

Staphylinus maxillosus, Linn. Faun. Suec. no. 891[1].
Staphylinus villosus, Grav. Micr. p. 160[2]; Er. Gen. et Spec. p. 349[3].
Creophilus villosus, Nordm. Staph. p. 319[4].

Hab. North America[2 4], from Alaska southwards.—Mexico[3], Ciudad in Durango (*Forrer*), near the city (*Flohr*, *Höge*), Cordova, Juquila, Guanajuato (*Sallé*), Chihuahua (*Hepburn*), San Luis Potosi and Monclova (*Dr. Palmer*); Guatemala, Dueñas (*Salvin*). —Cuba[3].

SCHIZOCHILUS.

Schizochilus, Gray, An. King. xiv. p. 210.
Staphylinus, Fam. V., Er. Gen. et Spec. p. 358.
Diococephalus, Nordm. Staph. pl. 1. fig. 8, not in text.
Leistotrophus, Perty, Del Anim. p. 30.
Leistotrophus, pars, Munich Cat. vol. ii.

This genus has been united with *Leistotrophus* by modern authors, but quite erroneously; the very peculiar structure of the front tarsi, unique in the family, is of itself sufficient for its distinction; and to this must be added other characters of importance, such as the absence of a stigmatic membrane, the differently formed anterior tibiæ, the very widely separated middle coxæ, with the mesosternum scarcely produced between them in a very gentle curve. Only one species is known. The name *Leistotrophus* was proposed by Perty for our insect; but as it has since become applied to a number of well-known species, I think it would be better to continue to apply the name as is generally done, it being, in my opinion, hopeless to adopt any absolute system of priority for the names of genera, owing to the constant fluctuations that genera undergo.

1. Schizochilus versicolor.

Staphylinus versicolor, Grav. Mon. p. 119[1]; Er. Gen. et Spec. p. 359[2].
Schizochilus brasiliensis, Gray, An. King. xiv. p. 304, pl. 32. fig. 3[3].
Leistotrophus versicolor, Munich Cat. ii. p. 576[4].
Staphylinus infuscatus, Nordm. Staph. p. 29[5].

Hab. Mexico, Toxpam, Cordova (*Sallé*), Misantla (*Höge*), Jalapa[5]; Guatemala, Calderas, San Gerónimo, Cubilguitz, Zapote, La Tinta (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Costa Rica, Cache, Irazu, 6000 to 7000 feet (*Rogers*); Panama, Bugaba, David, Volcan de Chiriqui, San Lorenzo, Tolé (*Champion*).—South America to Rio de Janeiro.

STAPHYLINUS.

Staphylinus, Linné, Syst. Nat. ii. p. 683.
Platydracus, Thoms. Sk. Col. i. p. 23.

This genus, as I accept it here, is equivalent to *Platydracus*, Thoms., no forms related to the two European species for which Thomson reserved the name *Staphylinus* occurring in our fauna. In this restricted sense *Staphylinus* will still comprise about one hundred described species, and is distributed over the continental regions of the

Old and New Worlds, being absent, however, from Australia and Madagascar. If *Staphylinus* and *Platydracus* be really distinct, as seems probable, it will be well to apply the Linnæan name to the genus comprising the great majority of the species that were included in it by Linnæus.

1. **Staphylinus extensus.**

Major, niger, opacus; capite, thorace elytrisque violaceis, nigro-pubescentibus, dense haud fortiter punctatis; antennis brevibus, alis fusco-fulvis.
Long. 40 millim.

Hab. Costa Rica, Cache (*Rogers*); Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ only as long as the head; joints 6–10 transverse. Thorax about as long as broad, densely punctate, with an indistinct shining line along the middle, which becomes broader and distinct at the base. Elytra without punctuation, of a blue or violet colour, but rendered black by a very dense pubescence. Hind body covered with an intensely black tomentum.

The male has the hind tibiæ much sinuate, and the basal joint of the hind tarsus a good deal incrassate and very densely furnished with pubescence beneath: the apical ventral segment slightly, the preceding one scarcely visibly, emarginate beneath.

Mr. Champion found four examples in tapirs' dung in the forests, Rogers a single specimen which is now in very bad state. The species is excessively similar to *S. buqueti*, but the front parts are more blue, the hind body more intensely black, and the sexual development of the hind legs of the male is greater, while the emargination of the ventral plates is much less.

2. **Staphylinus ferox.** (Tab. IX. fig. 14, wing.)

Staphylinus ferox, Nordm. Symb. p. 39[1]; Er. Gen. et Spec. Staph. p. 384[2].

Hab. Mexico, Cordova (*Sallé*), Jalapa[1 2] (*Höge*); Panama, Volcan de Chiriqui, 4000 to 6000 feet, Bugaba 800 to 1500 feet (*Champion*).

3. **Staphylinus atrox.** (Tab. IX. fig. 15, wing.)

Staphylinus atrox, Nordm. Symbol. p. 38[1].

Hab. Mexico[1] (*Flohr*), Cordova, Toxpam (*Sallé*), Jalapa (*Höge*).

Erichson has stated that *S. atrox*, Nordm., is a synonym of the Brazilian *S. buqueti*, and that Nordmann was wrong in stating the insect to be from Mexico. It appears to me, however, that Nordmann was correct, and that Erichson, confounding the *S. atrox* with the Brazilian species, inferred Nordmann to be in error on account of the habitat of other specimens. At any rate, Nordmann's description applies to the

present species, which is distinguished from all its allies, including *S. buqueti*, by the colour of the wings, a character which is apparently quite constant; but I am not able to point out any other means of distinguishing the species from *S. ferox*. Nordmann's statement that *S. atrox* is 2″ 2‴ long is an error for 1″ 2‴, and is corrected by the measurement he gives of the head, viz. 3‴, which corresponds with the insect we are at present occupied with.

4. **Staphylinus fulvomaculatus.** (Tab. IX. fig. 13.)

Staphylinus fulvomaculatus, Nordm. Staph. p. 39; Er. Gen. et Spec. Staph. p. 384.

Hab. Mexico, Cordova, Guanajuato (*Sallé*), Jalapa (*Flohr*, *Höge*), Oaxaca, Tehuacan (*Flohr*), Orizaba (*coll. Sharp*); Guatemala, Aceytuno, 5100 feet (*Salvin*), Escuintla (*Champion*).

This remarkable species appears to be far from common, only about a dozen specimens from all sources having come under my observation, three of these being from Guatemala. Mr. Flohr informs me that it is usually found in ants' nests, but also occasionally in dung. The figure is drawn from a female example found at Cordova. The figure of the wing (fig. 13 *a*) is that of the specimen found by Mr. Salvin.

5. **Staphylinus caliginosus.**

Staphylinus caliginosus, Er. Gen. et Spec. Staph. p. 388[1].

Hab. Mexico[1], Oaxaca, Jalapa (*Höge*), Parada, Puebla, Guanajuato, Etla, Capulalpan, Yolos (*Sallé*), Las Vigas, Maravatio (*Flohr*); Guatemala, Dueñas, Quezaltenango, 7800 feet (*Champion*).

This is an extremely variable species; varieties in Sallé's collection are ticketed *S. caudatus* and *S. scutellaris*, Deyr., and Mr. Flohr has communicated another variety as being *S. pardalis*, E. Dugès, all these being MS. names. The hind body is at the extremity usually of a sordid red colour, as described by Erichson, but occasionally it is completely black; the head and thorax are sometimes of an æneous colour; the tibiæ and tarsi vary from black to testaceous in colour; and the elytra are sometimes ferruginous instead of black. In fresh specimens there are always to be detected some few fuscous scales on the elytra and hind body, and in the paler specimens these become much increased, so that the surface is very much more variegate, and in these specimens the pubescence of the under surface is paler and more elongate. I am not acquainted with any other species of *Staphylinus* showing so great an amount of variation.

It is very closely allied to the North-American *S. mysticus*, Er., and the larger individuals attain the stature seen in its congener; but even in these examples of similar size, the antennæ of the North-American species are considerably longer and more slender, so that the two are probably really distinct.

6. **Staphylinus sepulchralis.**

Staphylinus sepulchralis, Er. Gen. et Spec. Staph. p. 388 [1].

Hab. MEXICO [1], Toluca and Puebla (*Sallé*).

A small series of five specimens of this species show that it is extremely similar to the blacker varieties of *S. caliginosus*, but is really a very distinct species, the middle coxæ being absolutely contiguous; the basal joints of the antennæ are not marked with yellow, and the hind body has no trace of black spots. The rufescence of the middle of the tarsi alluded to by Erichson is not present in these examples, and was perhaps due to an immature condition of the example described by Erichson.

7. **Staphylinus biseriatus.**

Niger, opacus; abdomine segmento singulo ad latera parce griseo-pubescente; capite thoraceque densissime punctatis, nigro-pubescentibus; pectore abdomineque subtus parce griseo-pubescentibus; palpis piceis.
Long. 27 millim.

Hab. GUATEMALA, near the City (*Champion*).

Antennæ short, scarcely longer than the head, black, very obscurely ferruginous at the apex. Head a little narrowed in front, about as broad as the thorax; eyes occupying scarcely two fifths of the length from the base of the mandibles to the hind margin; the surface rather coarsely, very densely punctured and with a short pubescence. Thorax a little more finely punctured than the head, at the base in the middle with a short linear space, dull, not shining, free from pubescence. Elytra about as long as the thorax, dull black, without visible punctuation; scutellum velvet-black. Hind body dull, with a faint black tomentum, without sculpture; on each side of each segment there is a patch of pale grey scanty tomentum, which is denser at the base than at the hind margin, and is very inconspicuous on the apical segments. Legs black, with the front tarsi piceous.

A single female is all that has been obtained of this very distinct species; it is of the stature of the smallest and narrowest examples of *S. atrox*. The middle legs are moderately distant.

8. **Staphylinus vittatus.** (Tab. IX. fig. 16.)

Fulvo-ferrugineus; pectore, scutello abdominisque vitta mediali nigris, abdomine utrinque vitta lata pubescentiæ aureo-flavæ; antennis fuscis, basi et articulo ultimo rufis; pedibus rufis, coxis nigris.
Long. 26 millim.

Hab. MEXICO, Juquila, Parada (*Sallé*), Uruapan (*Flohr*).

Antennæ conspicuously longer than the head, rather slender. Head and thorax very densely punctured, quite dull. Elytra not at all maculate. Under surface to a large extent black, the three or four apical segments, however, entirely red.

This is a much more slender insect than *S. maculiventris*. Of the three examples

before me only the one figured (a male found at Juquila) is in good preservation, and it has the anterior parts covered with a nearly concolorous pubescence, which on the elytra is more flavescent; the example from Parada is very abraded; that from Uruapan is somewhat immature and abraded, but the pubescence on the elytra is rufescent and concolorous, and the black spots of the hind body are considerably narrower; I expect all will prove to be one species. Mr. Flohr imforms me that in November 1870 he found two examples of *S. vittatus* amongst damp leaves in a garden at Acapancingo near Cuernavaca.

9. **Staphylinus maculiventris**. (Tab. IX. fig. 17.)

Capite, thorace elytrisque rufo-fulvis; abdomine nigro, segmentorum marginibus elevatis segmentoque ultimo rufo-variegatis, segmento singulo ad latera macula conspicua pubescentiæ aureo-flavæ; pedibus testaceis, coxis femoribusque ex parte nigris, tibiis fusco-spinulosis.

Long. 27 millim.

Hab. Mexico, Ventanas, 2000 feet (*Forrer*).

Antennæ rather longer than the head, red. Head large; eyes occupying scarcely more than one third of the length of the sides; colour dull red, with the mandibles black, very densely punctate. Thorax similar in colour to the head, very densely and obscurely punctured, quite dull. Scutellum velvety black. Elytra as long as the thorax, slightly more obscure in colour than it, and with a very faint maculation at the shoulder and sides, quite dull, densely and indistinctly punctured. The maculation of the hind body by the yellow spots of pubescence is very conspicuous. The male has a slight emargination of the last ventral plate.

The species is closely allied to the North-American *S. vulpinus*, but the thorax is of brighter colour, and the pubescent yellow spots of the hind body are much more conspicuous, extending all the way along the side of each segment, but not across the base. Three individuals have been found.

10. **Staphylinus funebris.**

Nigerrimus, opacus, nigro-tomentosus; abdomine in medio bifariam nigro-velutino bimaculato, apice obscure rufo.

Long. 19 millim.

Hab. Guatemala, Purula (*Champion*).

Antennæ entirely black, short, and stout. Head with dense, coarse, obsolete punctures, and with quite black pubescence; quadrate, the eyes occupying scarcely one half the sides. Thorax quadrate, densely and obsoletely punctured, with quite black tomentum; a short bare space along the middle at the base. Hind body intensely black, but allowing two black velvety spots to be seen on the middle of each segment; the apex dark red.

This also is described from a single example in bad preservation. Though very

similar to certain of the darker varieties of *S. caliginosus*, it is distinct by the more quadrate head and thorax, and by the antennæ, which are not marked with yellow at the base; in these respects it resembles *S. incognitus*, from which it is distinguished by the larger punctures on the thorax, and the intensely black colour of the surface and of the pubescence.

11. **Staphylinus incognitus.**

Niger, opacus, griseo-pubescens; abdomine in medio bifariam nigro-velutino bimaculato, apice testaceo.
Long. 20 millim.

Hab. Mexico, Coatepec (*Flohr*).

The antennæ are entirely black, short, evidently thickened towards the extremity. Head quadrate, not narrowed in front, excessively densely punctured. Thorax quadrate, excessively densely punctured, very dull, without smooth line along the middle. Elytra as long as the thorax, excessively densely and indistinctly punctured. Hind body black, with minute grisescent atoms mixed with the black tomentum, on the middle of each segment with two rather distinct black spots; the terminal segment, the anal styles, and the hind margin of the penultimate segment yellow.

This is described from a single, very abraded individual, but indicates a species certainly distinct; the head and thorax are more quadrate than in *S. caliginosus*, and the eyes occupy a slightly greater extent of the sides, just less than one half; the punctuation of the head, thorax, and elytra is more dense; and if I may judge from a small amount of pubescence existing on the extremity of the wing-cases, the anterior parts of the body bear a more pallid griseous pubescence.

12. **Staphylinus angusticeps.** (Tab. IX. fig. 18.)

Omnium nigerrimus, opacus, nigro-tomentosus; abdomine in medio parum conspicue bifariam nigro-bimaculato; minus parallelus, capite thoraceque angustioribus magis elongatis.
Long. 24 millim.

Hab. Mexico (*Flohr*), Puebla and Toluca (*Sallé*), Jalapa (*Höge*).

Readily distinguished from other species by the peculiar form, the head being considerably narrower than the thorax, and the thorax also narrower than the elytra; the mandibles too are rather longer, the front tarsi narrower, and the raised margin along the sides of the thorax less fine than in the allied species. There is a very fine carinula along the middle of the thorax, and the punctuation of these parts is excessively dense, rather coarse. The middle coxæ are only slightly separated. The male characters are but slight, being limited to a broad shallow emargination of the apical ventral plate. Apparently not a common species, as I have seen only a single example from each of the localities above cited: the one figured is a female sent by Mr. Flohr; but the figure does not give a good idea of the insect, the head being drawn too square.

13. **Staphylinus tempestivus.**

Niger, opacus, nigro-tomentosus ; abdomine in medio bifariam nigro-maculato ; capite in medio obscure rufo-bimaculato ; alis violaceo-nigrinis.
Long. 26 millim.

Hab. Mexico, near the city (*Forrer*).

This insect is very similar in form to *S. maculosus*, and is of the size of the smallest individuals of that species, but is readily distinguished by the intense black colour. The antennæ are black, with the terminal joint rusty colour. The head is narrowed in front, the eyes do not occupy one half of the length of the sides, it is very densely and coarsely punctured, and has two small obscure ferruginous spots on the middle. The thorax is punctured like the head, and has a well-marked smooth line along the middle. The elytra are dark black, and have a few grisescent atoms sprinkled amongst the pubescence. The hind body is rather sparingly and indistinctly punctured, very deep black, with a few white atoms amongst the pubescence on the upper surface ; on the under surface these atoms are replaced by griseous hairs amongst the pubescence, and across the extreme base of the penultimate segment there is a band of grisescent pubescence. The wings in colour and pigmentation are almost exactly similar to those of *S. atrox*.

I have seen only a single male.

14. **Staphylinus castaneus.**

Staphylinus castaneus, Nordm. Staph. p. 54[1] ; Er. Gen. et Spec. Staph. p. 379[2].

Hab. Mexico [1 2], near the city (*Flohr*), Cordova (*Sallé*), Jalapa (*Höge*).

15. **Staphylinus phœnicurus.**

Staphylinus phœnicurus, Nordm. Staph. p. 57[1] ; Er. Gen. et Spec. Staph. p. 380[2].

Hab. Mexico [1 2], near the city (*Flohr*, *Höge*), Acaxuchillan (*Flohr*), Toluca (*Sallé*).

16. **Staphylinus maculosus,** var.

Staphylinus maculosus, Grav. Mon. Micr. p. 123[1] ; Er. Gen. et Spec. Staph. p. 375[2].

Hab. North America [1 2].—Mexico (ex coll. *Saunders*).

The only individual from our region known to me is a well-marked variety with fuscous pubescence on the thorax, and almost without atoms of golden tomentum on the hind body, with the basal joint of the antennæ black on its upper face, and with a greater extension than usual of the black colour of the legs.

17. **Staphylinus fervidus.** (Tab. IX. fig. 19.)

Ferrugineus ; capite thoraceque æneo-variegatis, dense fortiterque punctatis ; elytris griseo-subvariegatis, scutello nigro-tomentoso ; abdomine fusco-variegato, pubescentia aureo-flavescente vestito, in medio bifariam fusco-maculato ; corpore subtus aureo pubescente, pectore anterius, prothorace et capite ex parte majore nigricantibus ; antennarum basi pedibusque (cum coxis) testaceis.
Long. 19 millim.

Hab. Mexico, Cordova, Mirador (*Sallé*).

This is very closely allied to the smaller and paler-coloured examples of *S. fusco-maculatus*, but is readily distinguished by the beautiful pallid golden pubescence of the hind body, and by the coxæ not being darker than the rest of the legs. The hind body beneath is densely and finely punctate, the basal segment is nearly entirely red, as is the apical one, the second segment is largely infuscate on the middle, and the following still more largely. The variegation of the head and thorax is similar to that of *S. fuscomaculatus*, except that the æneous markings along the middle are less in extent; the raised smooth line along the thorax is only to be perceived for a short space at the base.

Described from two examples found at Cordova; the third example, from Mirador, has the hind body much less densely punctate beneath, and it is possible it may belong to a distinct though very similar species. The figure fails to give any idea of the variegation of the hind body.

18. **Staphylinus vestitus.**

Gracilis, ferrugineus; capite thoraceque æneo-variegatis, crebre fortiusque punctatis; elytris fusco-subnebulosis; abdomine variegato, pubescentia aureo-flavescente vestito, in medio bifariam fusco-bimaculato, segmentis 4°–6^{m} ex parte majore fuscis; pectore capiteque subtus nigro-variegatis; antennarum basi pedibusque (cum coxis) testaceis.

Long. 15–17 millim.

Hab. Mexico, Cordova (*Sallé*).

This is another species very similar to *S. fuscomaculatus*, but the individuals are more slender, and are clothed, like *S. fervidus*, with a golden flavescent pubescence; it is distinguished by the very coarse punctuation of the head and thorax. On the under surface the basal two segments of the hind body are entirely flavescent, the fourth has a black mark on the middle, the fifth and sixth are in larger part black, the seventh being again entirely pale; the punctuation and pubescence on segments five to seven is not dense; the prosternum is flavescent, the inflexed sides of the pronotum dark in front; the head black in the middle and on each side, with a large red vitta between the black marks.

Described from two males: a third example from the same locality is still smaller, and has the upper surface more definitely variegate, and the punctuation of the head and thorax not quite so coarse; it may possibly be another extremely closely allied species.

19. **Staphylinus fuscomaculatus.**

Emus fuscomaculatus, Lap. Etud. Ent. p. 113[1].

Staphylinus fuscomaculatus, Er. Gen. et Spec. Staph. p. 376[2].

Hab. Mexico [1 2], near the city, Jalapa (*Flohr*), Cordova (*Sallé*), Juquila (*Höge*); Guatemala, Cachil in Vera Paz (*Champion*).

This species, of which I have seen but a few examples, is apparently variable, the hind body being sometimes fusco-ferruginous instead of black; and in the example from Jalapa the tibiæ are in larger part black. The specimens from Juquila belong to a remarkably small and slender variety, with the hind body towards the extremity in large part red. The unique individual from Guatemala is in bad preservation, and is possibly a different species, the dark marks on the head and thorax being of great extent and the pubescence apparently fuscous.

20. **Staphylinus affinis.**

Staphylinus affinis, Solsky, Hor. Soc. Ent. Ross. v. p. 126 [1].

Hab. Mexico [1], near the city (*Flohr*), Oaxaca, Mirador, Cerro de Plumas, Maltrata (*Höge*), La Parada (*Sallé*); Guatemala, Zapote, San Gerónimo (*Champion*).

This is another species variable within the limits of Mexico, and extremely close to some of the varieties of *S. fuscomaculatus*. From Guatemala I have seen only three examples; they are very aberrant from the Mexican examples, but do not agree sufficiently with one another to allow me to distinguish them by any satisfactory character.

21. **Staphylinus discretus.**

Niger; elytris saturate rufis, tibiis tarsisque fusco-testaceis; abdomine in medio minus conspicue bifariam nigro-maculato; capite thoraceque fortius punctatis, hoc in medio linea lata impunctato.
Long. 16 millim.

Hab. Mexico, Las Vigas (*Flohr*).

Antennæ rather short, evidently thickened externally, black; second joint red at its articulation. Head rather small, distinctly narrowed in front; eyes occupying less than one half of the sides. Thorax short, quadrate, straight at the sides, with very coarse punctuation, and with a broad smooth space along the middle, continuous with which is a smooth line on the posterior part of the head. Elytra obsoletely punctate, of a pale, sordid red colour, scarcely nebulose. Hind body black, but little variegate.

Although I have only a single example in very abraded state at my disposal, and it is very similar to the smallest, dark examples of *S. affinis*, yet I have no doubt it is distinct, and will be recognized by the broader smooth space on the thorax; fresh examples will probably prove to have a rather scanty black pubescence on the head, thorax, and elytra.

22. **Staphylinus marcidus.**

Niger; capite thoraceque fusco-subæneis, nigro-pubescentibus; elytris fusco-rufis, fusco-nebulosis; abdomine in medio bifariam nigro-bimaculato, tibiis prope geniculos plus minusve late sordide testaceis; corpore subtus parce griseo-pubescente.
Long. 20 millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet, Bugaba 800 to 1500 feet (*Champion*).

Var. pedibus latius pallidis.

Hab. Costa Rica, Irazu 6000 to 7000 feet (*Rogers*).

Head coarsely and very densely punctured, almost black, with black pubescence. Thorax not elongate, straight at the sides, with punctuation and pubescence like the head, with a shining line, which is broad in front of the scutellum, along the middle, usually with a minute obscure ferruginous mark on each side of the middle of the front and hind margins. Elytra about as long as the thorax, of a very obscure fuscous-reddish colour, largely mottled with darker marks. Hind body, including the anal styles, black, with only a very slight sprinkling of grisescent pubescence at the sides.

This insect is almost equally closely allied to *S. fuscomaculatus* and to *S. affinis*, but is much darker in colour than either, and has a rather longer head than *S. affinis*, while the thorax is rather shorter than in *S. fuscomaculatus*. The specimens from the Volcan Irazu are far from agreeing with those from Panama; but they also do not accord amongst themselves in the points of distinction, the hind femora in some being in larger part yellow, while in others the black mark nearly covers their surface.

23. **Staphylinus memnonius.**

Niger; capite, thorace elytrisque fusco-subæneis, his parum conspicue griseo-marmoratis, illis fusco-pubescentibus, dense fortiterque punctatis, thorace ante scutellum area parva lævigata; abdomine in medio parum conspicue bifariam nigro-maculato; corpore subtus parum dense griseo-pubescente; pedibus nigro-fuscis, tibiis superne sordide testaceis.

Long. 22 millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ black, with the base of the second joint red. Head rather large, only a little narrowed in front, very densely coarsely punctate; eyes a little prominent, occupying about one half of the length of the sides. Thorax very nearly as long as broad, straight at the sides, punctured and pubescent like the head, with only a narrow and short space in the middle at the base smooth. Elytra of a very dull obscure fusco-æneous tint, with faint griseous marmorations arising from a very scanty griseous pubescence scattered on places where is also a slight difference in the tint of the ground-colour, at the shoulders obscurely rufescent. Scutellum clothed with black tomentum. Hind body black, scarcely variegate, the black spots on the middle of each segment obscure. Legs with the coxæ and femora nearly black, the hind trochanters infuscate yellow, the knees and upper part of the tibiæ very obscure yellow.

Although extremely similar to *S. marcidus* and the *S. affinis* allies, this is a distinct species by the colour of the wing-cases and the absence of a carinula along the length

of the thorax. Eight specimens have been found, one of which (a slender male) is only about 19 millim. long.

24. **Staphylinus apicipennis.**

Angustulus, niger; capite, thorace elytrisque subæneis, peropacis, his ad apicem griseo-pubescentibus; abdomine fusco-subvariegato, in medio bifariam maculato, apice ferrugineo-nigro.
Long. 19 millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Head rather small, coarsely, very densely punctured; eyes occupying about one half the length of the sides. Thorax evidently longer than broad, straight at the sides, extremely densely punctured, without any longitudinal smooth space. Elytra scarcely so long as the thorax, with a dark fuscous pubescence, which at the hinder part is replaced by a griseous pubescence. Scutellum velvet-black. Hind body blackish, with two rather widely separated black spots on the middle of each segment, and with an obscure admixture at the sides of pallid griseous pubescence; the hind margin of the sixth segment dark red, and also the whole of the seventh segment; anal styles dark red, black at the extremity. Under surface of head and hind body with a rather coarse punctuation. Femora black, middle and hind tibiæ blackish, streaked externally with yellow; tarsi dark, clothed rather densely with paler hairs.

Described from a single, rather abraded male. It bears a great resemblance to *S. antiquus*, and might easily be passed over as of that species, from which, however, it is readily distinguished by the less extent of the sides of the head occupied by the eyes. It is very similar also to the Mexican *S. incognitus*, which, however, has a larger, more quadrate head, with denser, more confluent punctuation, and longer elytra.

25. **Staphylinus ignotus.**

Niger; capite, thorace elytrisque æneis, illis dense fortiter punctatis, fusco-pubescentibus; abdomine tomentoso-vestito, bifariam fusco-variegato, apice testaceo; mento magno transversim elliptico, eburnaceo.
Long. 22 millim.

Hab. Mexico, Mirador (*Sallé*); Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ rather slender, fuscous. Head broad; eyes rather prominent, large, occupying more than half the length of the sides. Thorax not so long as broad, straight at the sides, without distinct central smooth line. Elytra a good deal longer than the thorax, very dull, densely covered with very fine tomentum, and with a scanty pubescence besides. Hind body densely covered with fine tomentum, with two elongate obscure darker marks on the middle of each segment; the seventh segment and the anal styles yellow, the extreme hind margin of the preceding segment red. Legs fuscous black.

This is one of a small group of species, of which *S. ochropygus*, Nordm., may be taken as the type, having a very peculiar condition of the mentum; they have also the left mandible more deeply excised between the base and the middle tooth than other species, so that it is there much more slender.

I have three specimens of *S. ignotus* before me, two being from Mexico; all of them are in bad preservation.

26. **Staphylinus championi.** (Tab. IX. fig. 20.)

Latior, niger; capite, thorace elytrisque æneis, illis densissime fortiter punctatis, fusco-pubescentibus; abdomine parum conspicue bifariam nigro-variegato; mento minore, eburnaceo.
Long. 24 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ rather slender, fuscous. Head broad, slightly narrowed in front, very densely punctate. Eyes occupying fully one half of the length of the sides. Thorax large, scarcely broader than long, straight at the sides, extremely densely punctured, without smooth line, except on a short and narrow space at the base. Elytra quite dull. Hind body black, and with two indistinct black marks on the middle of each segment, with scattered punctures visible among the pubescence. Under surface bearing a rather pallid fuscous pubescence.

Three individuals have been found of this species. Although extremely similar to *S. ignotus*, it is a very distinct species, the mentum is only about half as broad, and the mandibles have not the peculiar form they have in that species.

27. **Staphylinus consors.**

Latus, niger; capite, thorace elytrisque æneis, illis densissime fortiter punctatis, opacis, fusco-pubescentibus; abdomine medio parum discrete bifariam maculato, utrinque fusco-pubescente.
Long. 22 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ rather slender, fuscous red, with the base darker. Head rather large, with the eyes occupying fully one half the length of the sides. Thorax as long as broad, quite dull, very densely punctured, with traces only of a smooth line along the middle. Elytra as long as the thorax. Hind body black, with two indistinct black spots on the middle of each segment, at the sides with fuscous pubescence; with rather numerous coarser punctures visible among the pubescence.

This species is very similar to *S. championi*, but has a smaller head and shorter mandibles, and the mentum is in the ordinary membranous condition. It is distinguished from *S. antiquus* by the rather larger size, and by the eyes not occupying so great a proportion of the sides of the larger head. Only one ill-preserved individual has been found.

28. **Staphylinus sallæi.**

Haud latus, niger; capite, thorace elytrisque fusco-æneis, illis dense fortiter punctatis, haud omnino opacis, fusco-pubescentibus; abdomine fusco-pubescente, in medio parum conspicue bifariam maculato; tibiis tarsisque fusco-testaceis.

Long. 21 millim.

Hab. Mexico, Parada (*Sallé*).

Antennæ nearly black; second and third joints yellow at the base. Head moderately large, eyes occupying fully one half the length of the sides, coarsely and closely punctured, but with the interstices a little shining. Thorax about as long as broad, slightly narrowed towards the front, punctured like the head, with a narrow smooth line along the middle, which is continuous with a still narrower line on the posterior half of the head. Elytra not longer than the thorax, quite dull. Hind body black, clothed with fuscous pubescence, its variegation indistinct. Posterior femora dull sordid yellow, marked with black; middle and posterior tibiæ and tarsi fuscous reddish.

This is narrower than *S. consors*, and has a less densely punctate head and thorax; it is closely allied to *S. antiquus*, but is larger, and the eyes do not occupy so large a portion of the sides of the head; by this latter character and by the concolorous apex of the hind body it is distinguished from the Amazonian *S. priscus*. I have seen only a single example.

29. **Staphylinus modestus.** (Tab. IX. fig. 21.)

Haud latus, nigerrimus, nigro-tomentosus; abdomine in medio bifariam nigro-maculato; capite thoraceque omnino opacis, illo minore anterius angustato, hoc elytris paulo longiore densissime subtiliter punctato.

Long. 19–21 millim.

Hab. Mexico, Jalapa (*Flohr*, *Höge*).

Antennæ short. Head narrower than the thorax, considerably narrowed in front, very densely and subobsoletely punctate, with quite short pubescence; mandibles black; eyes occupying fully one half the length of the sides. Thorax rather longer than broad, very densely and indistinctly punctate. Scutellum clothed with intensely black velvety pile. Hind body very black, with two indistinct velvety distant spots on the middle of each segment.

The male has a deep emargination on the terminal ventral plate, and a slight emargination on the preceding segment; in front of the latter emargination the surface is impressed.

I have seen but two examples of this species. It is very similar to the North-American *S. tomentosus*, but is a good deal narrower, and has a smaller head, a larger proportion of its sides being occupied by the eyes, the pubescence is less rusty, and the hind body is free from the conspicuous larger punctures seen in the North-American insect. In the figure the head is represented too short and broad.

30. **Staphylinus centralis.**

Haud latus, niger, nigro-tomentosus; abdomine in medio bifariam nigro-maculato, inter maculas parum distincte griseo-maculato; capite thoraceque omnino opacis, illo minore anterius angustato, hoc densissime subobsolete punctato; tarsis anterioribus ferrugineis, posterioribus piceis subtus ferrugineo-pubescentibus.
Long. 20 millim.

Hab. MEXICO, Oaxaca (*Höge*); GUATEMALA, San Gerónimo (*Champion*).

This species is extremely closely allied to *S. modestus*, but is readily distinguished by the maculation of the hind body and by paler tarsi, and the punctuation of the head and thorax is a little coarser. It is also extremely similar to *S. medialis*; but that has the head and thorax more quadrate and closely punctate, and the eyes occupy a larger portion of the sides of the head.

Höge's collection has supplied five examples of this species, while from Guatemala only one has been received. The Mexican individuals have a slight brassy tint on the head and thorax, which is absent from the Guatemalan exponent; and this latter has the thorax rather more densely and finely punctate, and the central pallid marks on the hind body rather narrower and less conspicuous.

31. **Staphylinus medialis.**

Niger, nigro-pubescens et tomentosus; capite thoraceque vix subæneis; abdomine in medio parum conspicue bifariam nigro-maculato, inter maculas parum dense griseo-variegato, segmento ultimo basi summo fascia flammulata pallide griseo-pubescente.
Long. 21 millim.

Hab. MEXICO, Oaxaca (*Höge*).

Head narrower than the thorax, subquadrate, little narrowed in front, coarsely punctate; eyes large, occupying fully two thirds of the length of the sides. Thorax scarcely as long as broad, densely and coarsely punctate, with a black pubescence, a smooth shining line in front of the scutellum extending one third of the length. Elytra rather longer than the thorax, very dull black. Hind body with the maculation only slight, the central pallid spot at the base of each segment being small, and the black spot of tomentum on each side of it obscure; the flammulate fascia at the base of the terminal segment consists of scanty pale pubescence placed among the black tomentum.

I have seen only a single female example, which is very closely allied to *S. mexicanus*, but is much narrower and has the hind body less variegate.

32. **Staphylinus mexicanus.**

Sat latus, niger, nigro-pubescens et tomentosus; capite, thorace elytrisque subæneis; abdomine nigro griseoque variegato.
Long. 23, lat. $4\frac{1}{4}$ millim.

Hab. MEXICO, Misantla (*Flohr*).

Head rather large and broad, subquadrate, coarsely and very densely punctured; eyes

occupying two thirds of the length of the sides. Thorax quadrate, quite dull, very densely, rather coarsely, punctate, with a very short shining line in front of the scutellum. Elytra as long as the thorax. Hind body with a rather faint mark of whitish pubescence at the middle of the base of each segment—this mark is rendered more conspicuous by the tomentum on each side of it being blacker and more dense; the sixth segment has at its hind margin a short, irregular, transverse, faint pallid fascia, and the terminal segment has at the extreme base a flammulate fascia extending all across it; the lateral portions of the anterior segments are also obscurely variegate with sparing griseous atoms.

Mr. Flohr has sent a pair of this species; the male has a deep broad excision on the terminal ventral plate, and there is a depression along the margins of the excision; the preceding segment also is broadly and conspicuously emarginate, and somewhat depressed in front of the emargination, and the middle portions of these two segments are more densely and finely punctate and more pubescent.

This insect is about the size of *S. tomentosus*, but is readily distinguished by the different eyes and more variegate hind body.

33. **Staphylinus antiquus.**

Staphylinus antiquus, Nordm. Staph. p. 35[1]; Er. Gen. et Spec. Staph. p. 373[2].

Hab. Mexico (*Flohr*), Toxpam, Cordova, Playa Vicente (*Sallé*), Mirador, Jalapa, Oaxaca (*Höge*); Guatemala, Cubilguitz and Teleman (*Champion*); Honduras (*Sallé*); Nicaragua, Chontales (*Belt*); Panama, Bugaba 800 to 1500 feet (*Champion*).—South America[1 2], widely distributed.

This is the most abundant and most variable of the Tropical-American species of the genus. In our region it shows much variation. I have not observed any examples agreeing exactly with the variety from Para described as the type of the species by Nordman; but an example from Chontales in my collection approaches in most respects thereto, but has the antennæ entirely ferruginous; the examples from Bugaba differ but little from Colombian specimens. The species apparently is very common in Mexico, where also it varies a good deal, many examples having the hind body but little variegate, and dark even at the extremity.

34. **Staphylinus cyanomelas.**

Staphylinus cyanomelas, Er. Gen. et Spec. Staph. p. 392[1].

Hab. Mexico[1], Patzcuaro (*Flohr*), Puebla (*Sallé*), Oaxaca (*Höge*).

35. **Staphylinus salvinianus.** (Tab. IX. fig. 22.)

Niger; capite thoraceque fortius punctatis, nigro-pubescentibus, hoc omnino opaco, anterius parum angustato et

subsinuato; elytris nigro-tomentosis hic inde parcissime albido-spergatis; abdomine parum dense nigro-tomentoso, segmento singulo ad basin et latera albido-variegato; corpore subtus cinereo-pubescente.
Long. 22 millim.

Hab. MEXICO (*Flohr*), Jalapa (*Höge*), Cordova (*Sallé*).

Antennæ evidently thicker externally. Head narrower than the thorax, quadrate, with large eyes occupying fully two thirds of the length of the sides, with a remarkably distinct, deep, coarse punctuation, but not shining. Thorax about as long as broad, coarsely and very closely punctured, with a very small smooth space in front of the scutellum, this latter velvety black. Elytra very dull, black, slightly sprinkled in an irregular manner with minute white pubescence. Hind body black, on the middle and sides of each segment with a white pubescence, which is most developed on the apical segments, where it forms a fascia extending all across the base of the segment. The male has a slight emargination of the apical ventral plate, and in the female the front tarsi are much less broad than they are in the other sex. The figure is drawn from two examples found at Jalapa; it does not give an adequate idea of the variegation of the hind body, which, as in many other species of the genus, is too delicate and complex, as well as variable according to the light, to be faithfully rendered.

36. **Staphylinus optatus.**

Niger; capite thoraceque cyaneis, subnitidis, fortius punctatis; elytris subcyaneis; abdomine parum dense nigro-tomentoso, segmentis basalibus vix albido-variegatis, 5°–7ᵐ basi fascia flammulata albida.
Long. 22 millim.

Hab. MEXICO (*coll. Sharp*).

This species is very closely allied to *S. salvinianus*, but has the anterior parts of a beautiful violet-blue tint; the punctuation of the head and thorax is less dense, so that the interstices being broader give a somewhat more polished appearance.

I have seen only a single example, of the female sex, obtained from Mr. G. R. Waterhouse's collection. The surface of the wing-cases and hind body are apparently less variegate with white than they are in *S. salvinianus*, but this is possibly due to abrasion; the front tarsi are not much dilated.

37. **Staphylinus guatemalenus.**

Niger, nigro-pubescens et tomentosus; capite thoraceque cyaneis, sat nitidis, crebre fortiter punctatis; elytris nigro-cyaneis, opacis, subtiliter vageque albido-nebulosis; abdomine albido-variegato.
Long. 24 millim.

Hab. GUATEMALA, Sinanja (*Champion*).

Antennæ with the three basal joints elongate. Head quadrate, not narrowed in front, coarsely but not densely punctate, the interstices between the punctures being quite as large as the punctures: eye occupying just a little more than one half the length of the side; mandibles elongate and slender. Thorax a little narrowed in front,

and distinctly sinuate there, punctured like the head, with an obscure, short, smooth space in front of the scutellum. Elytra longer than the thorax. Hind body black, the three basal segments only very minutely variegate at the sides and middle with white hairs, the three apical segments more broadly and distinctly variegate with white at the base. Breast rather densely clothed with white pubescence; hind body beneath quite sparingly punctate.

The unique individual found is a male, and has a slight broad emargination of the apical segment: the species has a resemblance to *S. cyanomelas*, but is very distinct on account of its variegate hind body, longer basal joints to the antennæ, and other characters; it is more nearly allied to *S. optatus*, but has no violet tint in its blue colour, has a larger head, with the eyes occupying a slightly less extent of the sides, and more elongate basal joints to the antennæ.

38. **Staphylinus belti.** (Tab. IX. fig. 23.)

Minus latus, niger; capite thoraceque læte cyaneis, nitidis, crebre minus fortiter punctatis, nigro-pubescentibus; elytris opacis, subcyaneis, nigro-tomentosis, parum distincte albido-nebulosis; abdomine nigro-tomentoso, albido-variegato.

Long. 19 millim.

Hab. Nicaragua, Chontales (*Belt*).

This is a very distinct species, with eyes for this genus more than usually prominent, occupying just over one half the length of the sides of the head; the sides of the thorax are strongly sinuate in front, and there is an impunctate line along the middle. The hind body has the three basal segments spotted with white at the sides, not in the middle; the fifth and seventh segments are broadly marked with white. The under surface bears much white pubescence. Although of narrower form than the average of the genus, the middle coxæ are widely separated; the ligula is broad, and its two slightly separated lobes are each distinctly rounded.

A single female example is all I have seen.

39. **Staphylinus mendicus.**

Niger; capite thoraceque cyaneis, nitidis, crebre fortiter punctatis; elytris cyaneis, subopacis, nigro-pubescentibus; abdomine subnitido, apicem versus albido-variegato.

Long. 20 millim.

Hab. Guatemala, Zapote (*Champion*); ? Costa Rica (*Van Patten*).

Head broad, not narrowed in front, eye occupying rather more than half the length of the side, with a rather coarse but not close punctuation, so that the interstices are larger than the punctures. Thorax quadrate, but little narrowed and sinuate in front, rather coarsely not densely punctate, shining, with only a very narrow and indefinite impunctate line down the middle. Elytra of a similar colour to the head and thorax, but not shining; very indistinctly punctate. Hind body almost destitute of tomentum,

sparingly punctate, the sixth and seventh segments each with a band of scanty white hairs at the base, the preceding segments with just a few white hairs at the base of each at the middle and sides. Breast with well-marked cinereous pubescence; hind body beneath very sparingly punctate, shining.

The species has a *Philonthus*-like aspect, and is similar in form to *P. splendens*, but is more robust and rather larger; the ligula is acuminate, with the angle very minutely emarginate.

A pair taken at Zapote are similar to one another, except that the male has the anterior parts broader than the female. A third individual, found in Guatemala, without special locality, has the punctuation rather less coarse; a mutilated and abraded individual from Costa Rica doubtfully belongs to the same species.

40. **Staphylinus chiriquensis.**

Niger; capite thoraceque subcyaneis, crebre minus fortiter punctatis, pernitidis, scutello nigro-tomentoso; elytris purpureis, subtiliter discrete punctatis, sat nitidis; abdomine tomentoso, opaco, segmentis 6° et 7° basi parcius albido-pubescente.

Long. 19 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Head quadrate, very distinctly but not closely punctate, and with an impunctate space on the middle; eye occupying about one half the length of the side. Thorax punctured like the head, with a broad impunctate line along the middle. Hind body black, not shining, being covered with a black tomentum, except at the anterior outer angle of each segment; the two apical segments furnished at the base with only scanty griseous hairs.

This is a very peculiar species, resembling *Philonthus* in the definite punctuation of the wing-cases; the ligula is very distinctly emarginate. A single male only has been found; it has a broad very shallow emargination of the apical ventral plate, and a slight emargination of the preceding segment.

41. **Staphylinus gracilipes.** (Tab. IX. fig. 24.)

Niger; capite thoraceque aureo-æneis; elytris fulvis, basi apiceque aureo-pubescentibus; abdomine nigro-tomentoso, segmentis terminalibus dense aureo-tomentosis; antennarum basi, tibiis tarsisque rufis, femoribus nigricantibus, antennis ante apicem obscurioribus.

Long. 15–18 millim.

Hab. Mexico (*Flohr*), Cordova (*Sallé*), Misantla, Jalapa (*Höge*).

Head short and broad, with long mandibles and rather prominent eyes, coarsely punctate, but with the surface shining, bearing a scanty flavescent pubescence. Thorax subquadrate, rather small, similar in punctuation, pubescence, and colour to the head, with a narrow smooth space along the middle. Scutellum with dense black tomentum. Elytra of a tawny colour, clothed at the base and extremity with golden pubescence, so

that there is the appearance of a darker fascia across the middle. Hind body black, with the hind margin of the sixth segment, the seventh segment, and the terminal styles yellow; the basal segments have scarcely any golden tomentum, but the fifth segment has a very large patch thereof, and the sixth and seventh are entirely covered with it.

The male has a slight emargination of the apical ventral segment; the anterior tarsi are moderately dilated in each sex.

This is another very peculiar species, with much longer and more slender feet than is usual in this genus, and with less broad anterior tarsi, the two next species agreeing with it in these respects. It is subject to some variation in colour of the metallic parts, and in one decayed example from Cordova the fascia on the elytra is almost entirely absent.

42. **Staphylinus tarsalis.**

Niger; capite thoraceque purpureo-aureis; elytris fulvis, basi apiceque aureo-pubescentibus; abdomine nigro-tomentoso, segmentis terminalibus dense aureo-tomentosis; antennarum basi pedibusque rufis.
Long. 17–20 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This, although very closely allied to *S. gracilipes*, is almost certainly a distinct species; for, independently of the colour of the head and thorax (a point perhaps not of much importance), there are other differences: the head is narrower in proportion, and the eyes do not occupy quite so large a part of the sides, the punctuation of the head and thorax is finer, the sides of the thorax are distinctly sinuate in front, and the antennæ are broader and darker in colour.

Only two specimens have been found.

43. **Staphylinus insolitus.** (Tab. IX. fig. 25.)

Niger; capite, thorace elytrisque cyaneis, illis crebre fortiter punctatis, nitidis; abdomine apice testaceo dense aureo-pubescente.
Long. 15 millim.

Hab. Mexico, Panistlahuaca (*Sallé*).

Very similar in form to *S. gracilipes*, though of a totally different colour. The antennæ are thickened outwardly, nearly black. The thorax has an impunctate line along the middle. The elytra, of a very dark blue colour, have a fine distinct punctuation and a black pubescence. The basal segments of the hind body are without tomentum, and rather sparingly punctate and pubescent; the fifth segment has a little tomentum mingled with the pubescence, and the sixth is covered with a golden pubescence, as also is the following segment; the hind part of the sixth, the seventh segment, and the terminal styles yellow.

I have seen only a single example of this very *Philonthus*-like species; it is a male, and has a broad shallow emargination on the apical ventral plate.

The emargination of the ligula in this species is excessively minute; so that by this species and *S. mendicus*, the genus *Hesperus* is linked very closely with *Staphylinus*.

AMICHORUS.

Ligula parum prominula apice integro; palpi parum graciles; mesosternum inter coxas mediocriter productum, apice obtuse acuminato, absque carina transversa. Pedes graciles.

The insects for which I propose this generic name are apparently almost equally allied to *Staphylinus*, *Philonthus*, and *Hesperus*, their facies being intermediate between that of the two first-named genera; they cannot be associated with *Staphylinus* on account of the unemarginate ligula and the slender legs; while from *Philonthus* and *Hesperus* they depart by the absence of a transverse carina on the mesosternum, and by the extreme deflection in front of the prothoracic upper marginal line. The position of the genus is clearly between *Staphylinus* and *Philonthus*, with the former of which it is closely connected by means of those Central-American species I have located near the end of the genus *Staphylinus*.

1. **Amichorus fauveli.** (Tab. IX. fig. 26.)

Niger; capite, thorace elytrisque læte cyaneis, illis nitidis, crebre fortiter punctatis; abdomine apice late rufo- et aureo-pubescente.

Long. 14 millim.

Hab. Mexico (*Sallé*), Mirador (*Höge*).

Antennæ nearly black, stout, with the five or six penultimate joints transverse. Head rather narrower than the thorax, very coarsely punctate, with a smooth space on the middle; eye occupying more than one half of the length of the side. Thorax subquadrate, rather closely, moderately coarsely punctate, each puncture bearing a short black hair, a smooth line along the middle. Scutellum dark violet, pubescent. Elytra sparingly, distinctly, and finely punctate. Hind body rather shining, sparingly punctate and pubescent; the hind margin of the sixth segment, and the whole of the seventh, and the terminal styles, of a bright orange colour, and bearing a golden pubescence. Legs black.

I have seen only two examples of this species; both are females. The individual from Sallé's collection is of a more violet tint on the anterior parts than the other; this example is figured. The species is dedicated to M. Albert Fauvel of Caen, to whom we are chiefly indebted for our knowledge of the genus *Hesperus*.

2. **Amichorus cyaneus.**

Niger; capite, thorace elytrisque læte cyaneis, illis nitidis, fortiter minus crebre punctatis; abdomine parce punctato, segmentis 6° 7°que basi summo fascia pubescentiæ albidæ.

Long. 13 millim.

Hab. Mexico, Mirador (*Höge*).

Antennæ a little thickened externally, the four penultimate joints moderately transverse. Head quadrate, coarsely punctate, the punctuation absent from a large space on the anterior part; eye occupying fully one half of the length of the side. Thorax very shining, coarsely but sparingly punctate, the punctuation leaving very little trace of a smooth space along the middle. Elytra dull, indistinctly punctate. Hind body black, without the least trace of tomentum; sparingly punctate, each of the terminal two segments with a fascia of scanty white hairs at the extreme base. Breast with a scanty griseous pubescence. Legs black, tarsi rufescent.

I have seen only a single example; it is a male, and has a broad, moderately deep notch on the last ventral plate; the hind margin of the preceding segment is also a little emarginate.

3. **Amichorus vividus.**

Niger; capite, thorace elytrisque nitidissimis, illis viridi-cyaneis, minus crebre fortiter punctatis, his aureo-viridis subtiliter punctatis; abdomine apice late flavo.
Long. 12 millim.

Hab. Panama, Volcan de Chiriqui between 4000 and 6000 feet (*Champion*).

Antennæ much thickened externally, the terminal joint ferruginous, the penultimate joints strongly transverse. Head rather sparingly punctate, the punctuation absent from a space on the middle. Thorax with the sides evidently sinuate in front, punctate like the head, with a smooth space along the middle. Scutellum black, metallic on the middle, this part punctate. Elytra very distinctly punctate, of a beautiful metallic green colour, showing, according to the light, purple or golden reflections. Hind body shining, black, sparingly punctate, and with an extremely scanty flavescent pubescence; the hind margin of the sixth segment broadly yellow, as well as the whole of the seventh and the terminal styles. Legs elongate and slender, tarsi piceous.

Of this species also only one example has been found; it is a male, having a very slight emargination of the apical ventral plate.

FLOHRIA.

Corpus elongatum, subcylindricum; antennæ breves, latissimæ; palpi breves, labiales crassi articulo ultimo præcedente latiore et plus duplo longiore; caput collo lato parum abrupto. Prothorax linea marginali superiore ad angulum anteriorem subtus parum inflexa.

This curious insect is not at all closely related to any other known to me. There is no stigmatic membrane on the sides of the thorax; the ligula is broad at the extremity and slightly emarginate. The mesosternum is much produced between the middle coxæ, so that it has a very acute termination; its posterior portion is separated strongly from the anterior by a line curved in the middle but not angulated; the middle coxæ are very nearly contiguous; the metasternum is elongate, and the coxal appendages (at

its extremity in the middle) are remarkably large, separated by a deep incision, and are not at all bent upwards.

I suggest that the genus is at present best placed between *Philonthus* and *Ocypus*. I have named it in honour of Mr. Julius Flohr, to whom science is indebted for the discovery of a great number of new forms in the Mexican insect fauna, this being one amongst the number.

1. **Flohria laticornis.** (Tab. IX. fig. 27.)

Nigra; elytris viridibus, capite thoraceque nitidis, illo dense fortiter punctato, anterius glabro, hoc ad latera punctato; elytris crebrius profunde punctatis; abdomine elongato, crebre fortiter punctato.
Long. 11–20 millim.

Hab. Mexico, Almolonga, Jalcomulco, Uruapan (*Flohr*), Ciudad in Durango (*Forrer*).

Head about as broad as the thorax, a little narrowed behind to form the very broad neck; eyes small, the punctuation coarse, remarkably dense. Thorax longer than broad, straight at the sides, very convex transversely in front, with numerous coarse punctures on the sides, the middle broadly impunctate, except for four or five punctures on each side placed so as to form two irregular distant series. Scutellum densely punctured. Elytra as long as the thorax, their punctuation remarkably deep. Hind body very little pubescent, coarsely and evenly punctate, the hind margins of segments two to five densely crenulate.

I have examined four individuals of this species, three of them found by Mr. Flohr; one of them is a male. The characters are very slight, there being only a feeble dilatation of the front feet; but there is a broad shallow emargination of the last ventral plate. The figure is taken from a small female found at Uruapan.

ONTHOSTYGNUS.

Corpus gracile, dense punctatum, capite majore. Ligula integra; palpi elongati, articulo ultimo longiore, gracili, cylindrico. Coxæ intermediæ valde distantes; mesosternum inter eas absque carinula; femora mutica; tarsi anteriores in utroque sexu parum dilatati, posteriores, haud elongati, subdeplanati.

This genus is apparently closely allied to *Hesperus*, Fauv., though strikingly different therefrom in appearance. It has the side piece of the prothorax very small, so that the inferior marginal line is behind connected with the superior line far in front of the base; this character, in addition to the comparatively broad middle and hind feet, and the mesosternal structure are amply sufficient for its definition.

I am not acquainted with any species that can be referred to this genus other than the two whose discovery we owe to Mr. Flohr.

1. **Onthostygnus fasciatus.** (Tab. X. fig. 1.)

Niger; elytris basi apiceque transversim cinereo-pubescentibus; stylis analibus albidis, ad apicem fuscis.
Long. 17–21 millim., mandibulis clausis.

Hab. Mexico, Jalapa (*Flohr*).

Basal joint of the antennæ elongate, equal to the three following together; joints four to ten stout, five to ten each shorter than broad; terminal joint ferruginous. Head densely and not finely punctate. Thorax rather slender, a good deal narrower than the elytra, rather closely punctate, but with a broad space along the middle impunctate. Elytra rather closely and finely punctate, with a band of ashy pubescence at the base and another at the extremity. Hind body slender, rather closely and coarsely punctate.

This species was discovered by Mr. Flohr in the flowers of *Bromeliæ*. The sexual differences are apparently but slight; the individual figured is, I believe, a male.

Owing to the tarsi being represented edgewise they do not appear so broad in the figure as they really are.

2. **Onthostygnus pollens.**

Niger; abdomine apice testaceo; capite majore.
Long. 25 millim. (mandibulis clausis).

Hab. Mexico, Jalapa (*Flohr*).

Though closely allied to *O. fasciatus* this fine insect is certainly another species. The pubescence of the elytra is black and quite unicolorous; the hind part of the terminal segment is yellow, as are also the terminal styles, which are not tipped with black. The pubescence of the hind body is more abundant, and the punctuation on the apical part of each of its segments is more obsolete.

The unique example is no doubt a male, as it has a minute emargination of the apical ventral plate.

MISANTLIUS.

Corpus gracile, densissime punctatum, opacum. Antennæ tarsique elongati, graciles. Palpi elongati graciles; labiales articulo intermedio valde elongato, quam basalis sexies, quam ultimus duplo, longiore. Coxæ intermediæ approximatæ, mesosternum inter eas transversim ecarinatum.

This is a very distinct genus, with some affinity to *Philonthus*, but without any close ally; it will be readily recognized by the peculiar proportions of the joints of the labial palpi, their middle joint being remarkably elongate, while the basal joint is diminished. The side-piece of the prothorax is small, but extends from the base; it is little inflexed and its lower marginal line approaches the upper line at the front coxæ, so as to touch it, but does not disappear, but runs forward quite close to the upper line till near the front of the prosternum. The genus shares with *Onthostygnus* a peculiarity in the form of the middle trochanters, these not being acuminate at the extremity, but broad and subtruncate. The ligula is small and not emarginate. There is an obscure longitudinal carinulation of the middle of the mesosternum behind, which, however, is scarcely marked enough for a generic character. I am not acquainted with any species other

than those here described, one of which has long been in my collection, without locality, and was supposed by me, from its facies, to belong to the East-Indian region.

1. **Misantlius optatus.** (Tab. X. fig. 2.)

Flavo-ferrugineus; capite, thorace antennisque (basi excepta) nigricantibus; abdomine fuscescente, basi rufescente, apice late testaceo; opacus, elytris flavo-pubescentibus.

Long. 15 millim.

Hab. Mexico (*Flohr*), Misantla (*Höge*).

Head very densely punctate, quite dull, with red mandibles and palpi. Thorax very opaque, narrowed behind, densely and quite obsoletely punctate, very dull. Elytra rather longer than the thorax, densely punctate, clothed with a short golden pubescence. Hind body rather closely punctate, the three basal segments each with a short longitudinal plica at the base on each side, about halfway between the side and the middle, and extending less than half the length of the segment.

The male has a small emargination on the apical ventral segment, and the front feet are rather broader than in the female; the example figured is of the latter sex, and was found by Höge at Misantla. Mr. Flohr's example was sent me some years ago, without any specified locality.

2. **Misantlius torquatus.**

Ferrugineus; capite, thorace, antennisque nigricantibus; abdomine apicem versus nigro-fusco, stylis analibus rufescentibus, apicibus fuscis; mandibulis palpisque piceis; opacus, elytris minus læte flavescenti-pubescentibus.

Long. 17 millim.

Hab. Guatemala, Calderas (*Champion*).

Mandibles (of male) very elongate, beyond the middle abruptly attenuate and much twisted. Head very broad, very densely punctate. Thorax very obsoletely punctate. Hind body densely punctate; the three basal segments dark dull red, the three following blackish, the apical one (which is sparingly punctate) with metallic reflections; on each side of the three basal segments the pliculæ are connected together at the base by a deep transverse impression. Hind tarsi very elongate.

Though very similar to *M. optatus* this unique individual is distinguished by numerous good characters. It is a male, and has a distinct notch on the terminal ventral plate.

3. **Misantlius carinulatus.** (Tab. X. fig. 3.)

Ferrugineo-obscurus; capite nigro; antennis abdomineque nigricantibus; hoc basi rufescente, subnitido, parce punctato; capite, thorace elytrisque opacis, his dorso ad latera carinulato-marginato.

Long. 15 millim. (mandibulis clausis).

Hab. Mexico (*Flohr*), Toxpam (*Sallé*).

This is readily distinguished from the other two species by the colour of the thorax,

which is similar to that of the elytra, and by the sparingly punctate hind body; the thorax, too, is not only obsoletely but also sparingly punctate, and the punctuation of the head is less dense than in the preceding species; the sides of the wing-cases have a slightly raised margin proceeding forwards from the hind angle to near the shoulder; but this may possibly be peculiar to the male sex, the only one known to me.

The example figured is that from Sallé's collection. The individual sent by Mr. Flohr was probably found at Jalapa.

4. **Misantlius discedens.**

Niger; antennis, palpis tarsisque fusco-rufis; capite suborbiculari, dense punctato, disco parcius punctato, nitido; prothorace posterius angustato, dense omnium obsoletissime punctulato, pube subtilissima vestito; elytris abdomineque dense subtilissime punctatis.
Long. 13 millim.

Hab. Mexico, Yolotepec (*Sallé*).

Antennæ elongate and slender, the three basal joints black, the others infuscate-yellow; from joint five to ten each is shorter than the predecessor, the tenth being considerably longer than broad, the fifth at least twice as long as broad. Head very densely and finely punctured, the punctures becoming rather less fine on the middle and also less dense, so as to make a small space shining, the rest of the surface very finely pubescent. Thorax narrowed behind, with a very indistinct punctuation and a very fine pubescence, the latter so dense as to make the surface dull, which without it is shining. Elytra elongate, closely and finely punctate. Hind body slender, also densely and finely punctured.

The male has the front tarsi moderately dilated and a small emargination on the last ventral plate. The female is unknown.

Only a single fragmentary example is known. Though not very similar in appearance to the other species of *Misantlius* it is clear to me that it is really allied to them, though it will probably prove distinct enough for a separate genus; but the condition of the specimen will not allow a detailed examination.

PHILONTHUS.

Philonthus, Curtis, Brit. Ent. t. 610 (1825); Er. Gen. et Spec. Staph. p. 426.

This is a very extensive genus, comprising at present four or five hundred species, and is very widely distributed; certain of the species being disseminated by maritime commerce are found in various parts of the globe. The European species are numerous, and have recently been studied by C. J. Thomson and Cl. Rey, as well as by Fauvel, and the result of their studies has been that no European species in which the longer lateral seta of the prothorax is distant from the lateral margin remains in the genus. This character is certainly one of great importance, for the seta, remaining as a fixed point

at the outer side of the thorax, serves as a mark to indicate whether the lateral raised margin is deflexed to the underside of the thorax or not. In treating the genus for the present work I have, however, been obliged to place in it, as did Erichson, a considerable number of species in which the lateral raised margin being much deflexed is distant from the lateral seta; to have done otherwise would have necessitated the creation of several new genera, and could not, in fact, be properly carried out without making a complete revision of the exotic as well as the European forms. The species in our fauna are numerous, and to facilitate reference I have grouped them according to Erichson's method of arrangement, by which those agreeing in the number of punctures in the two dorsal series of the pronotum are placed together; and as a matter of convenience I have adopted Erichson's nomenclature and numeration of the groups, though one or more of these is unrepresented in our fauna. The genus *Belonuchus* was accepted by Erichson as distinct from *Philonthus*, though with some hesitation, on account of the spinose femora; but this is a very unsatisfactory character, being in many species confined to one sex; it has occasioned me much trouble, and has induced confusion in the case of other writers. Some further remarks on this will be found in the pages dealing with *Belonuchus*; but I must here mention that I have been obliged to include in *Philonthus* certain species in which the hind femur of the male bears a single series of spines, and that in the corresponding sex of the species of *Belonuchus* the femur is always armed with two series of spines.

§ 1. *Thorax punctorum seriebus dorsalibus nullis.*

1. **Philonthus crassulus.** (Tab. XI. fig. 1.)

Minor, rufo-brunneus; capite thoraceque fusco-rufis, elytris ad latera abdomineque ante apicem parum discrete fusco-maculatis, antennis pedibusque testaceis; prothorace lævigato.
Long. $6\frac{1}{2}$ millim.

Hab. Mexico, Las Vigas (*Flohr*), Guanajuato (*Sallé*).

This is a very distinct little insect. The antennæ are short, with the last seven joints transverse. The head is small, very shining, the mandibles short. The thorax is small, narrowed in front, and is remarkable by its shining surface free from punctures even on the disc and at the margins. The elytra are about as long as the thorax, rather finely and not closely punctured, of a reddish colour, with the suture dark and an indistinct dark mark on the side. The hind body is densely, very finely punctate, and the three terminal segments have some indistinct dark marks along the middle.

This species, like several others without thoracic punctuation, has a Quedioid appearance, and the upper marginal line of the thorax scarcely at all inflexed to the lower surface at the front angles. The male has the front tarsi moderately dilated. The pair of the species in Sallé's collection was labelled "*Philonthus rufescens*, E. Dugès."

§ 2. *Thorax seriebus dorsalibus* 3-*punctatis.*

2. **Philonthus abnormalis.** (Tab. XI. fig. 2.)

Elongatus, subdepressus, nigerrimus, nitidus, abdominis apice rufescente; thorace oblongo, seriei discoidalis puncto basali a punctis anterioribus longe remoto; elytris nitidis, minus crebre punctatis; abdomine rude pubescente, crebrius fortiter punctato.

Long. 10½ millim.

Hab. Mexico, Oaxaca (*Höge*).

Head suborbiculate, quite as broad as the thorax in the female, and in the male a little broader, very flat, canaliculate along the middle in front, extremely shining, and with only a few coarse punctures. Thorax straight at the sides, much narrower than the elytra, longer than broad, the basal puncture of the discoidal series placed at between one third and one fourth of the length in front of the base, and very distant from the two anterior punctures, which are near the front margin; there are also about six supplementary punctures near each side, besides those at the margin. Scutellum large, coarsely punctate. Elytra intensely black, shining, rather sparingly but not finely punctate. Hind body very black, with the apical segment lurid red, and the preceding segment black at the base becoming gradually red behind, the armature segment red, with the styles in greater part black; the pubescence is conspicuous and suberect, the surface rather shining and somewhat closely and coarsely punctate.

This is a peculiar species, located only temporarily in *Philonthus*, the thoracic marginal line being much inflexed in front, so that the elongate lateral seta is remote from it; the terminal joint of the hind foot considerably shorter than the elongate basal joint. Only two examples have been found, apparently male and female; in the former sex the front femora are armed with elongate spines, but the hind femora are slender and quite unarmed, although the insect has a very Belonuchoid appearance. The figure is taken from the female.

§ 3. *Thorax seriebus dorsalibus* 4-*punctatis.*

3. **Philonthus palmatus.** (Tab. X. fig. 4.)

Niger; capite thoraceque læte cyaneis, nitidis, illo quadrato, elytris violaceo-æneis; abdomine dense æqualiter punctato.

Long. 11–13 millim.

Hab. Mexico, Jalapa, Oaxaca (*Höge*), La Parada (*Sallé*).

Antennæ slender, penultimate joint as long as broad. Head short and rather broad; the eyes large, occupying quite two thirds of the length of the sides. Thorax like the head, of a beautiful violet-blue colour, shining; the four punctures of the discoidal series equidistant, very distinct; the sides scarcely sinuate behind. Elytra longer than the thorax, shining, of a golden brassy colour tinctured with violet, closely and finely punctate. Hind body closely and finely punctate.

The male has the front tarsi very broadly dilated, the female has them much dilated,

and in the former sex the apical ventral plate bears a moderately deep angular excision. Four examples are before me; the two males from Jalapa display the peculiarity, unusual in this genus, of being much smaller than the females; as the sexes have not occurred in the same locality, it is possible the females may prove to be those of another species.

The figure is taken from a female found at Oaxaca.

4. **Philonthus nigerrimus.**

Philonthus nigerrimus, Er. Gen. et Spec. Staph. p. 434[1].

Hab. Mexico [1], Parada, Puebla, Toluca (*Sallé*), Las Vigas (*Höge*).

Although very closely allied to *P. furvus*, and especially similar to the var. *P. flohri*, this is, I think, a distinct species. It is apparently confined to Mexico, and is replaced in California by another very similar insect, *P. alutaceus*, Fauvel *in litt.*

5. **Philonthus furvus.**

Philonthus furvus, Nordm. Staph. p. 88 [1]; Er. Gen. et Spec. Staph. p. 434 [2].

Hab. North America, from Labrador.—Mexico [1 2], Puebla, Parada, Guanajuato, Capulalpam (*Sallé*), Las Vigas, Oaxaca, Mirador (*Höge*); Guatemala, San Gerónimo, Guatemala city, Panajachel 5000 feet, Quezaltenango 7800 feet, Totonicapam 8500 to 10,500 feet (*Champion*); Costa Rica, Irazu 6000 to 7000 feet (*Rogers*).

Var. Elytrorum lateribus concoloribus.

Philonthus flohri, Sharp, Trans. Ent. Soc. Lond. 1876, p. 429 [3].

Hab. Mexico [3] (*Flohr*), Chiapas (*Sallé*).

This is a very variable species. In Mexico the common form has black elytra with the inflexed margin broadly yellow, the under surface of the body furnished with a grey pubescence, which also covers the raised lateral margins of the upper surface. In the var. *P. flohri* no trace exists of the yellow stripe, and the pubescence is darker and the punctuation finer; this variety apparently is not found in company with the common form, but I have seen a few specimens which connect it therewith. In the specimens from Guatemala the elytra are æneous and never have a yellow side-margin; but some of the individuals found at a great elevation at Totonicapam connect this variety with those (*P. flohri*, var.) of the Mexican form. Costa Rican individuals resemble those from Guatemala, but they are smaller, with shorter articulations to the antennæ, and a finer punctuation of the hind body.

6. **Philonthus sallæi.** (Tab. X. fig. 5.)

Nigerrimus, nitidus; prothorace lateribus posterius fortiter sinuatis; elytris abdomineque parce punctatis; antennis apicem versus parum incrassatis, articulis 7°–10ᵐ leviter transversis.

Long. 14–18 millim.

Hab. Mexico, La Parada (*Sallé*).

Third joint of the antennæ slightly longer than the second, fifth and sixth each a little longer than broad, seventh about as long as broad, the three following each slightly shorter and broader. Thorax short, not so long as broad, the four punctures of the discoidal series large and conspicuous. The punctuation of the elytra leaves their surface quite shining, and that on the hind body is not coarse.

The front tarsi of the male are only very slightly dilated, and the apical ventral plate bears a broad shallow excision. The species is described from a single male and a fragmentary female; but three individuals of the female sex with the anterior parts æneous, are, I think, only a variety of the same species. The example figured is the male above mentioned; it is much larger and broader than the other sex.

7. **Philonthus fissilis.**

Niger; capite, thorace elytrisque æneis; prothorace lateribus fortiter sinuatis, elytris abdomineque crebre subtiliter punctatis; antennis apicem versus vix incrassatis, articulo penultimo quam longitudo vix breviore.

Long. 12 millim.

Hab. GUATEMALA, Totonicapam 8000 to 10,500 feet (*Champion*).

This is another close ally of *P. furvus*, and resembles particularly the Costa-Rican variety thereof with short antennæ, but cannot be united therewith on account of the fact that the male anterior tarsi are almost undilated; *P. fissilis* has also a shorter thorax than *P. furvus*, and the pubescence of the under surface is less griseous; there may be detected an obscure picescence of the inflexed side of the wing-cases. The two examples found are both males, and have a broad shallow notch on the last ventral plate. One of them has the anterior coxæ flavescent; but I think this is an abnormal deficiency of colour, as it is not quite the same on the two sides of the body.

8. **Philonthus griseolus.**

Piceus, griseo-pubescens; antennis nigro-fuscis, articulo penultimo quam latitudo haud breviore; prothorace lateribus fortiter sinuatis; elytris abdomineque crebrius subtiliusque punctatis.

Long. 12 millim.

Hab. COSTA RICA, Irazu 6000 to 7000 feet (*Rogers*).

This is another species closely allied to *P. furvus*, but distinguished by its shorter thorax and the griseous pubescence of the upper and under surface, as well as by the different colour. Judging from a single example it appears about equal in size to the smallest example of *P. furvus*. The male anterior tarsi are strongly dilated, but there is only a very shallow excision on the last ventral plate. The unique individual is very greasy, and there is probably in good individuals a brassy tint on the anterior parts.

9. **Philonthus alticola.** (Tab. X. fig. 7.)

Elongatus, nitidus, nigricans; capite, thorace elytrisque æneis, antennis pedibusque piceis, tarsis palpisque rufis; prothorace lateribus posterius haud sinuatis; elytris quam ille fere brevioribus, cumque abdomine parce punctatis.

Long. 17 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

This, though a very distinct species, is still, I think, a real ally of *P. furvus*; it has the head rather longer, so that the eyes are farther from the vertex, the thorax scarcely at all sinuate behind, and the elytra rather shorter and narrower at the shoulders, indicating the probable absence of wings. The antennæ are rather slender, with the penultimate joint about as long as broad. Only one example (a female) has been found.

10. **Philonthus testaceipennis.**

Philonthus testaceipennis, Er. Gen. et Spec. Staph. p. 435, ♀ [1]; Solsky, Hor. Soc. Ent. Ross. v. p. 127, ♂ [2].

Hab. MEXICO [1] [2], near the city (*Flohr*), Las Vigas (*Höge*), La Parada, Yolos (*Sallé*).

In the male of this species the front tarsi are only slightly dilated, but the excisions of the ventral plates of the penultimate and terminal segments are remarkably large and the hinder tibiæ are slightly curved.

11. **Philonthus högei.** (Tab. X. fig. 6.)

Niger; capite thoraceque nitidis, elytris rufo-testaceis, cumque abdomine crebrius subtiliter punctatis.

Long. 14–16 millim.

Hab. MEXICO, Las Vigas (*Flohr*, *Höge*), Milpas (*Forrer*).

This insect is very similar to *P. testaceipennis*, but is distinguished at a glance by the closer punctuation of the elytra and hind body, and by the darker yellow colour of the wing-cases; the head and thorax have a very faint bluish tinge. In the male the front tarsi are not much dilated, the penultimate ventral segment has scarcely any emargination, and the notch on the terminal segment is not large; the hind tibiæ are quite straight.

Höge met with a very large series of this conspicuous insect. Our figure represents a male example.

12. **Philonthus piceatus.** (Tab. X. figg. 8, 9, et 10.)

Philonthus piceatus, Nordm. Staph. p. 85 [1]; Er. Gen. et Spec. Staph. p. 446 [2].

Philonthus iridiventris, Solsky, Hor. Soc. Ent. Ross. v. p. 128 [3].

Philonthus mexicanus, Sharp, Trans. Ent. Soc. Lond. 1876, p. 430 [4].

Philonthus rufo-plagiatus, Solsky, op. cit. p. 130 [5].

Hab. North America, Texas (*coll. Sharp*).—Mexico [1 2 3 4 5], Parada, Etla, Toluca, Guanajuato, Cuernavaca, Capulalpam (*Sallé*), Oaxaca, Las Vigas, Mirador, Jalapa (*Höge*); Guatemala, Capetillo, Aceituno, Guatemala city, San Gerónimo, Calderas, Ostuncalco 7500 feet, Quezaltenango 7800 feet, Quiche Mountains 7900 feet (*Champion*); Costa Rica, Irazu 6000 to 7000 feet (*Rogers*); Panama, Volcan de Chiriqui up to 6000 feet (*Champion*).

This is a most variable species. The greater part of the Mexican examples agree pretty well with Erichson's description (made from a single mutilated example), but there occur also some very remarkable varieties of coloration; one of these, found near Guatemala city by Mr. Champion, is represented (fig. 9); a similar example, but with more black colour on the hind body, was found in an ants' nest at Jalapa by Flohr; a second variety, of which four examples agreeing *inter se* are extant, from Calpulalpam (fig. 10). In Guatemala the larger portion of the specimens were found at a considerable elevation, and agree pretty closely with the ordinary Mexican form; nearly all the specimens from this region not registered as being found at much altitude are varieties, one of which from San Gerónimo is figured (fig. 8); this variety is of large size, with elongate antennæ, golden brassy, coarsely punctate elytra, and shows very brilliant reflections on the hind body. From the State of Panama many examples are before me; they agree closely *inter se*, are of dark colour, and differ only from the ordinary Mexican form in their rather larger stature. As a rule the species may be recognized by the peculiar scanty punctuation of the hind body, the surface of which exhibits iridescent reflections, and the few punctures on which are conspicuously setigerous; but there may be developed between these punctures an additional punctuation, which in a few examples reaches such an extent as to cause the hind body to be evenly though never closely punctate. It is remarkable that most of the varieties—differing widely as they do among themselves—depart from the type form by a slight structural variation, inasmuch as the transverse carina of the mesosternum, which in this species is very greatly developed, is only slightly waved in the middle, whereas in the type form it is a little more produced backwards, and forms in the middle an obtuse angle. I have satisfied myself by comparison of many of the varieties that this slight structural character is variable. Though *P. piceatus* is pretty certainly a variable species, it is far from improbable that some of the forms I have treated as varieties of it may prove to be really distinct species, more or less approximated to by variations of *P. piceatus*. The *P. rufo-plagiatus*, Solsky, is pretty certainly a variety allied to that represented by fig. 10 of our plate.

13. **Philonthus iris.** (Tab. X. fig. 11.)

Philonthus iris, E. Dugès in litt.

Niger; elytris læte cyaneis, antennarum basi pedibusque rufo-testaceis, abdomine metallico-versicolore; capite subovato, elytris abdomineque crebre minus subtiliter punctatis.

Long. 13 millim.

Hab. Mexico (*Flohr*), Cuernavaca, Capulalpam (*Sallé*).

Antennæ elongate, only a little thickened externally; second joint elongate, but little shorter than the third, penultimate joint longer than broad. Thorax curved at the sides but not at all sinuate, a little narrowed in; front like the head, of a very shining black colour. Elytra not longer than the thorax.

This species is closely allied by the structural characters to *P. fibularius*, but in addition to the colour differences, it has the antennæ less incrassate outwardly, and the thorax rather different in outline, owing to its being a little narrowed in front. The legs vary a little in colour, the tibiæ and tarsi being usually darker than the femora. The example figured is a female sent by Mr. Flohr.

14. **Philonthus fibularius.**

Philonthus fibularius, Er. Gen. et Spec. Staph. p. 442[1].

Hab. Mexico (*Flohr*), Cordova (*Sallé*), Oaxaca, Las Vigas (*Höge*).

This is apparently not a common species, but I have been able to examine a series of eighteen examples. It varies a little in the colour of the elytra, which is sometimes golden brassy tinged with purple, and in these brighter-coloured examples the thorax is a little longer and slightly sinuate at the sides.

P. fibularius may be taken as the type of a natural little group of species, comprising besides itself the preceding and the five following species; they all have the side-piece of the prothorax broad behind, and its marginal lines not connected in front, the superior line running on just under the front angle to the front surface, while the inner or inferior line is curved inwards in front to join the hind margin of the prosternum, an arrangement which much approximates the structure we find in *Quedionuchus*.

15. **Philonthus carinulatus.**

Niger; capite subovato, thorace elytrisque viridi-æneis, his crebre sat fortiter punctatis; abdomine versicolore, segmentis duobus ultimis stylisque analibus rufescentibus, tibiis piceo-testaceis; antennis extrorsum crassioribus; mesosterno in medio subtiliter longitudinaliter carinulato.

Long. 11 millim.

Hab. Mexico, Jalapa (*Flohr*), Oaxaca, Las Vigas (*Höge*).

This species is precisely similar to *P. fibularius*, but the angle on the middle of the mesosternum has a fine carina running backwards from it, and the hind margins of the two last segments are broadly rufescent, as well as the anal styles. I have satisfied myself, by a careful comparison of about twenty examples of the two species, that these characters are constant and valid.

One of the examples sent by Mr. Flohr was registered as found in an ants' nest.

16. **Philonthus guatemalenus.**

Niger; capite anguste ovato, thorace elytrisque viridi-æneis, his fortiter vix crebre punctatis, abdomine versicolore; tibiis margine externo testaceo, interno fusco; antennis extrorsum crassioribus; mesosterno in medio longitudinaliter carinulato.
Long. 11 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This is extremely similar to *P. fibularius* and *P. carinulatus*, but the unique example indicates, I have very little doubt, a distinct species, as the mesosternum is considerably more prolonged backwards between the coxæ, and its longitudinal carinula is more largely developed. *P. guatemalenus* is also probably a narrower insect, with considerably narrower head, and rather more coarsely punctate hind body. The specimen is a female.

17. **Philonthus accedens.**

Niger; capite subovato, thorace elytrisque æneis, his fortiter profundeque punctatis; abdomine versicolore, minus crebre punctato; antennis extrorsum crassioribus.
Long. 14 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

This is very closely allied to *P. fibularius*, but is larger and more robust, has the elytra more brightly coloured than in most individuals of that species, and with a coarser and deeper punctuation, and the hind body more sparingly punctate; the mesosternal triangle is a good deal larger than in *P. fibularius*, but has no trace of carination, and the tibiæ are entirely black. The two examples obtained are females.

18. **Philonthus cribripennis.**

Niger; capite subovato, elytris cyaneis fortiter profundeque punctatis; abdomine versicolore parce punctato; antennis elongatis, extrorsum crassioribus.
Long. 13 millim.

Hab. GUATEMALA (*Champion*).

Var. Paulo major, abdomine minus parce punctato.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This is closely allied to *P. fibularius*, but has the antennæ longer, the penultimate joint being as long as broad, the elytra of a dark blue colour, with remarkably deep and coarse punctures, and a quite scanty punctuation of the hind body. The mesosternal triangle is larger than in *P. fibularius*, and has no trace of carination. The unique example has not been ticketed with its exact locality; it is a male, but the front tarsi are not dilated.

The variety from the State of Panama is illustrated only by a badly preserved female, and I think is very probably distinct; it is rather larger, and has the elytra a little longer, rather more finely punctate, and the punctuation of the hind body rather greater.

19. **Philonthus chiriquensis.**

Niger; capite prothoraceque vix subæneis, elytris cyaneis fortiter minus dense punctatis, abdomine versicolore parce punctato; antennis extrorsum crassioribus.
Long. 16 millim.

Hab. Panama, Volcan de Chiriqui between 4000 and 6000 feet (*Champion*).

This is the largest insect of this group of species, and has the head and thorax comparatively less slender than any of the others. The penultimate joint of the antennæ is not quite so long as broad. The thorax is a good deal narrowed in front, and the impressed punctures on it are large. The punctures on the elytra are rather coarse, very definite, not close. The hind body is very fulgid, and the impressed punctures on it are scanty and coarse.

A single female only has been found.

20. **Philonthus boucardi.**

Philonthus boucardi, Solsky, Hor. Soc. Ent. Ross. v. p. 127 [1].

Hab. Mexico [1].

This dubious species was described apparently from a single female example; Solsky, in his enumeration of the rather numerous Mexican *Philonthi* known to him, does not include *P. fibularius*, Er.; and I think from this and his description that *P. boucardi* will probably prove a variety of *P. fibularius* with the elytra tinctured with violet colour.

21. **Philonthus atriceps.** (Tab. X. fig. 12).

Fere parallelus, subdepressus, brunneo-testaceus; capite nigro, abdominis segmento ultimo nigricante; antennis tenuibus, articulis medialibus fuscescentibus; prothorace subquadrato, serie discoidali subtiliter quadripunctata; elytris abdomineque dense, hoc fortius, illis subtilius, punctatis.
Long. 10 millim.

Hab. Mexico, Jalapa, Las Vigas (*Flohr*).

This is a very distinct readily recognized species, having very slender antennæ, not thickened outwardly, so that the penultimate joint is much longer than broad; each of joints 4–7 has its outward portion more or less infuscate, the rest being, like the palpi and labrum, red or reddish yellow. The subquadrate head is nearly as broad as the thorax, but in the female is somewhat narrower; it is black and shining, and very little punctate. The thorax is scarcely narrowed in front, and is nearly as long as broad; it is very shining, and its punctures are remarkably small. The scutellum is concolorous with the elytra; these are dull and very closely and regularly punctate. The legs and tarsi are slender, the tibiæ only very scantily spinose; the basal joint of the hind tarsus is longer than the terminal one; the front tarsus of the male is only slightly dilated and its very elongate terminal joint is equal in length to the other four together.

I am not acquainted with any other species at all like this; the middle coxæ are contiguous and the lateral lines of the thorax are not joined till the hind margin of the prosternum is reached. Mr. Flohr found it in ants' nests at Jalapa. The male is figured.

22. **Philonthus scintillans.**

Philonthus scintillans, Solsky, Hor. Soc. Ent. Ross. v. p. 131 [1].

Hab. Mexico [1], Puebla (*Sallé*).

23. **Philonthus apheles.**

Philonthus apheles, Solsky, Hor. Soc. Ent. Ross. v. p. 132, ♀ [1].

Hab. Mexico [1], Las Vigas (*Flohr*), Jalapa (*Höge*).

In the male of this species the front tarsi are very broadly dilated, in the female they are moderately broad, and in both sexes of a sordid flavescent colour. The individuals are similar to those of *P. feralis* and might easily be passed over for that common species. I have seen only five examples of *P. apheles*, four of which were found at Las Vigas by Mr. Flohr.

24. **Philonthus melanopus.**

Angustulus, nigerrimus; antennis sat elongatis, prothorace elongato, antrorsum minus angustato, abdomine dense subtilissimeque punctato.
Long. 9–10 millim.

Hab. Mexico, Jalapa (*Flohr*); Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*); Panama, Volcan de Chiriqui, between 2500 and 4000 feet (*Champion*).

Antennæ entirely black, third joint slightly longer than second, tenth rather longer than broad. Head rather small. Thorax longer than broad, slightly narrowed in front. Elytra longer than the thorax, quite black, rather closely punctate.

The front tarsi of the male are very broadly dilated, and the tibiæ also are a little dilated.

This insect is extremely similar to *P. feralis*, Er., but, independently of the number of punctures in the thoracic series, is distinguished by other good characters, the form being rather narrower and more parallel, the head less ovate, and the male anterior tarsi more dilated. It is almost equally similar to *P. apheles*, from which it differs by the rather longer antennæ, more elongate thorax, and the darker front tarsi. It is apparently uncommon, only six specimens having been obtained.

25. **Philonthus stygialis.**

Nigerrimus; antennis elongatis, extrorsum haud crassioribus, capite thoraceque oblongis, abdomine dense subtiliter punctato.
Long. 11 millim.

Hab. Guatemala, Balheu in Vera Paz (*Champion*); Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

Antennæ longer than the head and thorax, the penultimate joint nearly twice as broad as long. Head rather elongate, not ovate, eyes occupying but little more than half the length of the side. Thorax longer than broad, not narrowed in front. Elytra intense black, closely punctate, somewhat shining. Hind body densely punctate, except the terminal segment. The front tarsi of the male are moderately dilated.

This species differs from *P. melanopus* and *P. apheles* by its larger size, more elongate head and antennæ, longer wing-cases, and less densely and finely punctured hind body.

Four examples have been found, two in each locality; they agree closely.

26. **Philonthus vilis.**

Philonthus vilis, Er. Gen. et Spec. Staph. p. 451 [1].
Philonthus pauxillus, Solsky, Hor. Soc. Ross. v. p. 128 [2].

Hab. Mexico [2], Las Vigas (*Höge*); Guatemala, San Gerónimo, Zapote (*Champion*); Nicaragua, Chinandega (*Sallé*).—Antilles [1].

The colour of the elytra is correctly described by Solsky, and differs in our Central-American examples from that exhibited by individuals from the Antilles, but there does not appear to me sufficient difference for specific separation.

27. **Philonthus parvimanus.** (Tab. X. fig. 14.)

Parvus, fuscus; capite nigro, prothorace rufo, elytris fusco-rufis sutura dilutiore, abdominis segmentorum marginibus, antennarum basi pedibusque testaceis; capite ovato; elytris crebre subtiliter, abdomine crebrius subtillissime, punctato.
Long. 4–5 millim.

Hab. Mexico, Cordova (*Höge*); Guatemala, near the city, Paso Antonio, Champerico, San Joaquin in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*); Panama, David (*Champion*).

This is excessively similar to *P. vilis*, but smaller, of a more dilute colour; it has a narrower head, and rather more closely punctate elytra. The sexual characters, however, indicate it as a quite distinct species, the female anterior tarsi being undilated, and those of the male possessing only a very feeble dilatation; in this latter sex there is a very slight emargination of the last ventral plate.

About a dozen examples have been obtained. The figure is taken from an example found at Guatemala city.

28. **Philonthus ochromerus.** (Tab. X. fig. 13.)

Parvus, niger, nitidus; antennarum basi pedibusque testaceis; capite haud angusto; elytris parce sat fortiter, abdomine crebre subtilissime, punctato.
Long. 6 millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA near the city, San Gerónimo, Zapote, Capetillo, Calderas, Cerro Zunil, Lanquin, Senahu and San Joaquin in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Very closely allied to *P. vilis*, but with the thorax, elytra, and hind body quite black, the head slightly broader, and the male posterior tibiæ slightly curved and a little thickened towards the extremity. The tibiæ and the coxæ are more or less infuscate, but the femora are pallid yellow. The middle coxæ, as in *P. vilis*, are contiguous, and the front feet of the female are moderately, those of the male rather broadly, dilated; in this latter sex there is a deep notch on the last ventral plate.

This is apparently a common species throughout most of our region, and varies a good deal in the minor details. The description is taken from a long series, agreeing pretty closely, found at San Gerónimo. One of these is figured. In other cases the base of the antennæ becomes darker, and occasionally the elytra are picescent; and such an example is labelled in Sallé's collection, "*P. caliginosus*, E. Dugès, in litt."

29. **Philonthus occultus.**

Fuscus; prothorace piceo, antennarum basi pedibusque piceo-testaceis; capite ovato, prothorace antrorsum angustato; elytris crebre punctatis; abdomine dense subtilissime punctato.
Long. 7 millim.

Hab. GUATEMALA (*Sallé*).

Antennæ shorter than the head and thorax, but little thicker towards the apex, the penultimate joints each very nearly as long as broad. Head much narrower than the thorax, the latter rather longer than the elytra. Hind body very densely, evenly, and finely punctate.

This is an obscure species, of which only a single example has been received; it is a male and cannot be treated as an extreme variety of *P. ochromerus*, on account of the sexual characters, the front tarsi being broadly dilated and the front tibiæ short and thick, while the hind tibiæ are simple; there is a large notch on the last ventral plate.

30. **Philonthus planulatus.**

Subdepressus, niger, nitidus; elytris æneis, femoribus fusco-testaceis; capite subquadrato; elytris parce profunde punctatis; abdomine parce subtiliter punctato.
Long. 8 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet, Peña Blanca 3000 to 4000 feet (*Champion*).

Antennæ black, scarcely thickened outwardly, the penultimate joints not quite so long as broad; palpi rather long and slender. Head as broad as, or broader than, the thorax, extremely shining, quadrate, but with the hind angles greatly rounded. Thorax not narrowed in front, narrower than the elytra, very shining, and, like the head, with a

faint brassy tinge. Elytra sparingly but deeply and very distinctly punctate. Hind body very black, very finely punctate.

The male has apparently no external sexual marks, except that the head is larger; the front tarsi being quite simple, and the terminal ventral plate quite without emargination. I have certainly, however, this sex before me, as from one example I have extracted the large and peculiar œdeagus.

31. **Philonthus mollis.** (Tab. X. fig. 15.)

Subdepressus, nitidus, fuscus; prothorace rufescente, antennarum basi pedibusque flavis; abdominis segmentorum marginibus late testaceis; capite subquadrato.
Long. 7 millim.

Hab. Panama, San Feliz (*Champion*).

Antennæ rather short, the penultimate joints each not quite so long as broad, the basal two or three and the apical one pale, the intermediate joints being dark. Head piceous, very shining. Thorax straight at the sides, very shining, reddish yellow. Elytra scarcely so long as the thorax, shining, sparingly punctate. Hind body finely and not densely punctate.

The male characters are very remarkable; the head is larger, and the anterior part is curvedly emarginate in front, the space behind the labrum being occupied by a large membrane; the hind femora are armed on their posterior margin with some long black ciliæ, the anterior tarsi are slightly dilated, and there is a large emargination on the last ventral plate. This is the sex figured.

Only four examples have been found; they are in bad preservation, and perhaps immature, so that the coloration is perhaps not very correctly described.

32. **Philonthus ænescens.**

Philonthus ænescens, Solsky, Bull. Soc. Mosc. 1868, iv. p. 262[1].

Hab. Mexico[1].

§ 4. *Thorax seriebus dorsalibus* 5-*punctatis.*

33. **Philonthus cavifrons.**

Subdepressus, parallelus, fuscus; femoribus coxisque flavis, elytris abdomineque dense punctatis, subopacis; capite subquadrato.
Long. 7 millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Similar in form to *P. discoideus*. Antennæ dusky black, with the articular portion of each joint red, moderately stout, scarcely thickened outwardly; penultimate joints not quite so long as broad. Mandibles elongate, yellowish; terminal joint of the palpi long and slender. Head about as broad as the thorax; the latter scarcely narrowed in

front, of a piceous hue, the discoidal punctures rather large. Elytra scarcely so long as the thorax, closely and finely punctate, and rather densely pubescent; hind body very finely, closely punctate.

Only a single example has been secured; it is a male, and in the structure of the front of the head resembles the same sex of *P. mollis*, the front of the head being curvedly emarginate, and the labrum separated from it by a large membranous space; the anterior tarsi are rather broadly dilated, and the terminal ventral plate exhibits a rather broad, but not deep notch.

34. **Philonthus discoideus.**

Staphylinus discoideus, Grav. Micr. p. 38[1].
Philonthus discoideus, Nord. Symb. 97[2]; Er. Gen. et Spec. p. 474[3].

Hab. Mexico (*Flohr*), Cerro de Plumas, Las Vigas (*Höge*); Guatemala, near the city (*Champion*).—Cuba[3]; Europe[1 2 3]; Australia (*Mus. Sharp*).

35. **Philonthus quadraticollis.** (Tab. X. fig. 16.)

Robustus, parallelus, nitidus, niger, parce fusco-pubescens; elytris æneis; coxis femoribusque testaceis; capite quadrato; prothoracis seriebus grosse punctatis; elytris abdomineque parce punctatis.
Long. 9–12 millim.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Flohr*); Guatemala, San Gerónimo (*Champion*).—South America, Rio de Janeiro (*Mus. Sharp*).

The mandibles are elongate, a good deal curved at their apices; the terminal joint of the palpi is very elongate and slender. The antennæ are scarcely thickened externally, the penultimate joints not quite so long as broad. The head is large, broad, and nearly square, with four quadrately placed large punctures on each side between the eyes. The thorax is a little narrowed behind. The elytra are about as long as the thorax, with a scanty, very distinct punctuation, and rigid pubescence. The hind body only very sparingly punctate.

The male has the head larger, and largely depressed in the middle in front; its anterior tarsi are undilated, and there is a slight emargination of the apical ventral plate. This is a very distinct species, not closely allied to any other; the Brazilian examples are of a more pallid colour, but show no important difference. The figure is taken from a male found at Cordova.

36. **Philonthus lætipennis.** (Tab. X. fig. 17.)

Parce punctatus, nigerrimus; elytris cyaneis; scutello fortiter punctato.
Long. 7–8 millim.

Hab. Mexico, Misantla (*Flohr*).

Mandibles slender, elongate, and acuminate; last joint of maxillary palpi very long

and slender. Head subquadrate, but distinctly narrowed behind, the epistome depressed in the middle, and somewhat produced in front between the insertion of the antennæ, the clypeal membrane indistinct. The antennæ bear very evident exserted setæ, and their penultimate joints are not quite so long as broad. The thorax is rather narrow, and nearly straight at the sides. The elytra are of a beautiful dark blue colour, sparingly punctate. The hind body is acuminate behind, shining, of an intense black colour, with only a very few punctures, but very conspicuously setose. The legs are quite slender.

I do not know the sex of the three examples before me of this distinct species; they have the front tarsi simple, and the last ventral plate not emarginate. Although it has much the aspect of some of the slender *Belonuchi*, neither the front nor the hind femora are spinose.

37. **Philonthus fulgipennis.** (Tab. X. fig. 18.)

Parce punctatus, nigerrimus; elytris fulgidis, purpureis; scutello fortiter punctato.
Long. $6\frac{1}{2}$ millim.

Hab. PANAMA, Chiriqui (*Ribbe*), Volcan de Chiriqui below 4000 feet, Boquete 3500 feet (*Champion*).

This species is in nearly all respects similar to *P. lætipennis*, but is readily distinguished by the splendid golden-purple or coppery colour of the wing-cases; the individuals also are a little smaller, and have slightly more slender antennæ.

A very large series of examples was captured by Mr. Champion, who informs me it is locally abundant in fungus growing on forest trees. I cannot detect any external sexual characters; the front feet are always quite slender.

38. **Philonthus seticornis.**

Parce punctatus, nigerrimus; elytris nigro-æneis; scutello fortiter punctato.
Long. 9 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Though very closely allied in structure to *P. lætipennis* this is readily distinguished from that species by its differently coloured elytra; it is also rather more elongate, and has an evidently longer thorax.

A series of eight examples was found showing no variation; the male has no external sexual marks, and the œdeagus is small and simple.

39. **Philonthus hirtiventris.**

Elongatus, subdepressus, nigerrimus, nitidus; elytris abdomineque parce punctatis, hoc evidentius setosello; capite subcirculari.
Long. 11 millim.

Hab. MEXICO, Oaxaca, Mirador (*Höge*).

Structurally allied to the two preceding, this is nevertheless a very distinct species, and has much broader antennæ, joints 5–10 being strongly transverse; though, as in them, the head is narrowed behind, with the hind angles rounded and the eyes rather prominent. The thorax is straight at the sides. The elytra are sparingly and rather finely punctate; the scutellum a good deal more closely and coarsely punctured; although the hind body is only sparingly punctate, its pubescence is remarkably conspicuous, and on its under face the punctuation is rather coarse and deep.

Only a few examples have been found, but I appear to have the two sexes before me, for though all have the front feet simple, yet on comparison it is seen that there is an extremely slight emargination of the hind margin of the last ventral plate, which is no doubt indicative of the male sex.

40. **Philonthus idoneus.**

Elongatus, subdepressus, nigerrimus, nitidus; elytris abdomineque crebre vix fortiter punctatis, hoc evidenter setosello; thorace suboblongo, posterius angustato.

Long. 10 millim.

Hab. Guatemala, El Tumbador 2500 feet (*Champion*).

Antennæ rather thicker externally, with joints 6–10 transverse, but not strongly so. Head subquadrate, not narrowed behind, but the eyes slightly prominent. Scutellum coarsely punctate. Elytra rather finely and not sparingly punctate. Hind body moderately closely and finely punctate, the pubescence well marked, and the two penultimate segments with very coarse hairs.

Although very similar to *P. hirtiventris*, this is distinguished by good characters, the antennæ being less stout, the thorax evidently narrowed behind, and the wing-cases more closely and finely punctate. The only example discovered is no doubt a male, for though the front feet are quite simple, there is a slight emargination of the apical ventral segment.

41. **Philonthus rufopygus.** (Tab. X. fig. 19.)

Nigerrimus, nitidus, abdominis segmento ultimo rufo-testaceo; capite post oculos subangustato, antennis mediocriter latis; elytris abdomineque parce punctatis, evidenter setosellis.

Long. 8 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ black, joints 6–7 transverse, but not strongly so. Thorax oblong, straight at the sides, a good deal narrower than the elytra. Scutellum rather finely punctate. Elytra only sparingly punctate, furnished, in addition to their scanty depressed pubescence, with four rows of fine distant erect setæ. Hind body moderately closely punctate, very pubescent, and also with erect elongate setæ; the last segment, as well as the terminal styles, bright reddish yellow.

The front tarsi are simple in the male, and in that sex the head is broader, and

may even be twice as broad as it is in the female; the terminal ventral plate has a moderately large notch; the anterior femora are spinose, and the posterior femora are furnished with a series of elongate, but subdepressed spines along the under ridge of their hind margin, so that this sex will probably be supposed, on casual inspection, to be a species of *Belonuchus*.

A series of half a dozen examples was met with in rotten palm-fruits; the figure is taken from a male example.

42. **Philonthus rufocaudus.**

Parum latus, nigerrimus, nitidus; abdominis segmentis duobus ultimis læte rufo-testaceis; antennis latis; elytris parcissime punctatis, abdomine parcius punctato, conspicue nigro-setosello; thorace serie dorsali 5- vel 6-punctato.

Long. 6–8 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Antennæ very broad, joints 5–10 strongly transverse. Head evidently narrowed behind the eyes. Thorax almost straight at the sides. Scutellum with only a few punctures. Elytra very sparingly punctate, and with a few erect serial setæ. Hind body only sparingly punctate, but with remarkable distinct pubescence and coarse setæ; the two terminal segments as well as the apical styles bright reddish yellow, the coarse black setæ across the middle of the penultimate segment very remarkable.

The male has a small notch on the last ventral plate, but the front tarsi are quite simple; the anterior femora are apparently more spinose than they are in the female.

The number of punctures in the thoracic discoidal series is sometimes six instead of five.

43. **Philonthus platypterus.** (Tab. XI. fig. 3.)

Sat latus, depressus, niger; abdominis segmentis duobus ultimis rufo-testaceis; capite subquadrato, prothorace posterius angustato; elytris abdomineque crebrius punctatis; femoribus tarsisque piceis.

Long. 10 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ rather short, not stout, the penultimate joint as long as broad. Head broader than the thorax, with numerous coarse punctures on the sides, but impunctate along the middle, a broad impression in front; the eyes rather small. Thorax rather slender, and distinctly narrowed behind, the discoidal punctures large. Scutellum finely punctate. Elytra rather shining, but somewhat closely and not coarsely punctate. Hind body black, with the two terminal segments and the armature bright reddish yellow, rather densely and not finely punctate; basal joint of hind foot scarcely so long as the apical joint.

This species was found under sappy bark. It has quite the aspect of a *Belonuchus*, but the femora are destitute of spines, and though the lateral seta of the prothorax is

(as in numerous other species I have at present placed in *Philonthus*) distant from the anteriorly much inflexed side margin, yet I cannot place it in *Hesperus*, of which it has not at all the facies, and from which it differs in numerous details, such as having the mesosternal line in the condition normal in *Philonthus*.

Two males and one female of *P. platypterus* have been found; the male has the anterior femora angularly dilated in the middle behind, but there is no emargination of the last segment; this sex is figured.

44. **Philonthus corticalis.**

Depressus, niger; abdominis apice rufo-testaceo, stylis analibus nigris; capite subquadrato, prothorace posterius angustato; elytris abdomineque crebre sat fortiter punctatis.
Long. 9½ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Though closely allied to *P. platypterus* this is a smaller and narrower insect, with only the apical segment and the hinder part of that preceding it red; the terminal armature though red has the greater portion of the styles black.

The only example found is pretty certainly a male, though the only indication I see of this is that the trochanters of the hind legs are prolonged and have a slender free termination.

45. **Philonthus godmani.** (Tab. X. fig. 20.)

Nigerrimus, capite thoraceque violaceo-cyaneis, elytris fulgidis vel purpureis vel auratis; elytris abdomineque parcissime punctatis.
Long. 10 millim.

Hab. MEXICO, Orizaba (*Sallé*); GUATEMALA, Calderas 1200 feet, Panajachel 5000 feet, San Gerónimo 3000 feet (*Champion*); PANAMA, Boquete 3500 feet (*Champion*).

The antennæ are only moderately long, slightly thickened externally, the penultimate joints not quite so long as broad. The head is not broad, only as broad as, or not quite so broad as, the thorax, the eyes not prominent, the hind angles much rounded. The thorax is narrower than the elytra, nearly straight at the sides, and nearly parallel-sided. The scutellum is coarsely punctate. The hind body, pointed behind, bears only a very few punctures, and is of a shining, intense black colour.

This beautiful insect is apparently rare, only one or two examples having been found in each locality; they bear no external marks of their sex, although I have little doubt I have both sexes before me; the tarsi are in all quite simple. The Mexican example was labelled in Sallé's collection *P. trochilus*. Solsky's description of *P. trochilus*, though indicating a similarly coloured insect, states that the head is large, and that in the female the feet are subenlarged, so that it must be different from our species. The example figured is a variety with golden-green elytra from San Gerónimo; it is impos-

sible to represent satisfactorily by colour the delicate but brilliant metallic tints of the anterior parts of this insect.

46. **Philonthus nugax.**

Niger, nitidus; capite oblongo, antennis latis, articulis 4°–10^m transversis, elytris abdomineque crebre subtiliter punctatis; pedibus piceis.

Long. 6 millim.

Hab. MEXICO, Mirador (*Höge*).

Head very slightly narrowed behind the eyes, with a small longitudinal impression on the middle in front. The very broad antennæ are much shorter than the head and thorax, joints 5–10 very strongly transverse. Thorax elongate, much narrower than the elytra, shining black with a slight sericeous lustre. Scutellum densely punctate.

Although I am not able to describe the sexual characters, only a unique female having been found, yet this little insect should be readily recognized by the unusually thick antennæ.

47. **Philonthus infimus.** (Tab. XI. fig. 4.)

Depressus, niger, nitidus; abdominis segmento ultimo rufo-testaceo; capite quadrato, utrinque punctis paucis majoribus; prothorace posterius angustato; elytris parce, minus subtiliter, abdomine apicem versus crebrius, punctato.

Long. 6 millim.

Hab. GUATEMALA, Las Mercedes 3000 feet, Chiacam (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Antennæ short and stout, with joints 5–10 rather strongly transverse. Head broad, with a few remarkably distinct coarse punctures on each side, and finely canaliculate on the middle in front. Scutellum rather finely punctate. Elytra finely and sparingly punctate, black, shining. Hind body with the basal segments only sparingly and finely, the two or three penultimate segments closely and rather finely punctate. Legs rather stout and short, the hind tarsi short, the basal joint not longer than the apical one.

In some examples the head is larger, and I have no doubt these are the males, though I cannot detect other indication of their sex; one of these larger-headed individuals from Las Mercedes is figured.

This and the three following species form a peculiar group; they have much the facies of the genus *Holisus*, and resemble those insects by the depressed flattened shape and the stouter, shorter legs; the side piece of the prothorax is very small, and so greatly inflexed that it is not seen at all when the insect is examined at the side; the marginal line is inflexed to the under surface for all its length, so that it is not visible at all from above, and the elongate lateral seta is consequently remote from it.

48. **Philonthus extremus.**

Depressus, latior, nitidus, nigro-piceus; antennis nigris; capite quadrato, utrinque punctis paucis majoribus; prothorace posterius angustato; elytris sat crebre et sat fortiter punctatis.
Long. 7 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This is very closely allied to *P. infimus*, but is rather broader, and is readily distinguished by the unicolorous hind body.

Only a single, very immature, example has been found.

49. **Philonthus latecinctus.** (Tab. XI. fig. 5.)

Depressus, rufo-fulvus; capite, antennis abdominisque cingulo lato nigris, antennarum basi rufescente, abdominis apice testaceo, stylis nigris; capite quadrato, utrinque punctis paucis majoribus; prothorace posterius angustato; elytris abdomineque crebre sat fortiter punctatis.
Long. 7 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, San Gerónimo (*Champion*).

Antennæ with three basal joints red, the others dark; second and third joints subequal in length, fifth to tenth transverse, but not strongly. Hind body with the two basal segments red, and the three following black, the hind margin of the sixth and the whole of the terminal segment yellow, the armature also yellow, but with the styles black.

This species is again in most respects very similar to *P. infimus*, though so different in colour; the three examples found show no character by which the males can be certainly recognized.

50. **Philonthus lucilius.**

Depressus, rufus; capite abdominisque cingulo ante apicem nigris, antennis elytrisque fuscis, illis basi apiceque, his basi, rufis, abdomine testaceo; capite quadrato, utrinque punctis paucis majoribus; prothorace posterius angustato; elytris abdomineque sat crebre et sat fortiter punctatis.
Long. 7 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Very closely allied to *P. latecinctus*, but with several differences in the distribution of the colours. The antennæ have the three basal and the apical joint red, the penultimate joint being dusky red. The elytra are dusky red, with the base brighter red. The three basal segments of the hind body are reddish yellow, the next two black, the hind margin of the sixth segment yellow, as are also the whole of the terminal segment and the armature.

Only one example has been met with.

51. **Philonthus figulus.**

Philonthus figulus, Er. Gen. et Spec. p. 464 [1].
Philonthus amazonicus, Sharp, Trans. Ent. Soc. Lond. 1876, p. 165 [2].

Hab. MEXICO, Tuxtla, Cordova (*Sallé*), Jalapa (*Flohr*); GUATEMALA, Mirandilla, Cubilguitz, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*); COSTA RICA (*Rogers*); PANAMA, Volcan de Chiriqui (*Champion*).—SOUTH AMERICA [1] [2].

The specimens from our region all belong to a dark variety similar to what is found in Brazil at Rio de Janeiro, the Amazonian examples forming the other extreme. Although the species is in several respects a variable one I have failed to find at present satisfactory evidence of there being more than one included under it, though I formerly thought *P. amazonicus* distinct.

52. **Philonthus feralis.**

Philonthus feralis, Er. Gen. et Spec. p. 469 [1].

Hab. MEXICO, Las Vigas (*Flohr*, *Höge*), Cordova, Parada, Tepanistlahuaca (*Sallé*), Jalapa, Oaxaca, Mirador (*Höge*); GUATEMALA, Aceituno (*Salvin*, *Champion*), near the city, San Gerónimo, Cerro Zunil, Capetillo, Sabo, Senahu, San Juan, Purula, Teleman, El Tumbador (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Volcan de Chiriqui (*Champion*).—SOUTH AMERICA, Colombia [1], Venezuela.

53. **Philonthus longicornis.**

Philonthus longicornis, Steph. Ill. Brit. Ent. v. p. 237.
Philonthus scybalarius, Nordm. Symb. p. 94.
Philonthus varians, var., Er. Gen. et Spec. p. 470.
Philonthus fumosus, Solsky, Hor. Soc. Ross. v. p. 134 [1].

Hab. MEXICO [1] (*Flohr*), Las Vigas (*Höge*), Guanajuato (*Sallé*).—Fere in orbe toto.

Although I have not seen a type of Solsky's *P. fumosus*, I am not able to find any characters in his description which would distinguish it from *P. longicornis*, as a synonym of which I have therefore placed it.

54. **Philonthus incertus.**

Philonthus incertus, Solsky, Hor. Soc. Ross. v. p. 135 [1].

Hab. MEXICO [1], Las Vigas (*Flohr*).

55. **Philonthus flavolimbatus.**

Philonthus flavolimbatus, Er. Gen. et Spec. pp. 471 [1] and 929 [2].

Hab. NORTH AMERICA, South Carolina [2].—MEXICO, Cordova, Guanajuato (*Sallé*), Las Vigas, Tehuacan (*Höge*); GUATEMALA, near the city, San Gerónimo, Zapote, San Joaquin (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Tolé, Los Remedios (*Champion*). —SOUTH AMERICA, Colombia [1], Brazil.

56. **Philonthus xanthomelas.**

? *Belonuchus xanthomelas*, Solsky, Hor. Soc. Ross. v. p. 139[1].

Mas. Capite majore, mandibulis ad basin extus oblique dilatatis; femoribus anterioribus ultra medium longius spinosis.

Hab. North America, Arizona (*Morrison*).—Mexico[1], Jalapa (*Höge*), Puebla, Capulalpam (*Sallé*).

The resemblance of this insect to *Belonuchus formosus* is very great, but the male characters are quite different, and the colour is of a darker or more dusky red. The colour of the breast apparently varies somewhat, for though the mesosternum is black in all the examples before me, yet the metasternum in one or two is more or less dusky red. The legs vary in colour in a similar manner. The peculiar dilatation of the mandibles is not very conspicuous, except when they are extended, and in the smaller males is so much reduced that it may in extreme cases almost elude observation.

Although this insect cannot be placed in *Belonuchus* at present, owing to the hind femora being without spines in either sex, yet I expect it will prove to be the species Solsky intended under the name above cited; but as there are certain discrepancies between his description and one or two of the details of colour, in addition to the fact that the hind femora are unarmed, this identification cannot be considered as undoubted.

57. **Philonthus trochanterinus.** (Tab. XI. fig. 6.)

Rufus; capite cum antennis, thorace, scutello abdominisque apice nigris; elytris abdomineque parcius punctatis.
Mas. Trochanteribus posterioribus longe prolongatis, curvatim hamatis, femoribus basi excavata; stylis analibus extrorsum dilatatis.
Fem. Trochanteribus vix prolongatis, apice libero.
Long. 10–12 millim.

Hab. Guatemala, Capetillo (*Champion*).

This species has quite the colour and appearance of an enormous *Belonuchus formosus*, but the very peculiar sexual characters of the male readily distinguish it from that species, as well as from *B. validus*, which it still more resembles on account of the similar size. The head is broadly and conspicuously impressed on the middle in front; the punctuation of the hind body is much reduced, being both fine and scanty. The breast and all the coxæ are entirely clear red. The two terminal segments and the anal styles are black, as in the two *Belonuchi* mentioned. There are a very few short spines on the front femora of the female, and a rather greater number of slightly longer ones on those of the male; the hind femora are quite without spines in each sex. In the male there is a rather large emargination on the last ventral plate. An example of this sex is figured.

58. **Philonthus zunilensis.**

Rufus; capite cum antennis palpisque, thorace abdominisque apice nigris; elytris abdomineque parcius punctatis.

Long. 11–13 millim.

Mas. Trochanteribus posterioribus breviter prolongatis, acutis, femoribus basi excavata; segmento 7° ventrali apice subprolongato, haud emarginato.

Fem. Trochanteribus posterioribus parum prolongatis, apice acuto, femoribus basi simplice.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

This species presents an almost exact resemblance in appearance to *Belonuchus formosus*, but is much larger and has the scutellum pale; this last named character is peculiar to it, all the numerous similar species having the scutellum black. All the coxæ and the whole of the breast are pale.

Only four examples were captured.

59. **Philonthus basiventris.**

Nitidus, nigerrimus; elytris et abdominis medio rufis, pedibus testaceis; elytris abdomineque parcius punctatis, nitidioribus.

Long. 9–11 millim.

Mas. Capite majore, mandibulis ad basin extus oblique dilatatis, femoribus anterioribus ultra medium longius spinosis.

Hab. MEXICO, Cordova, Puebla, Yolos (*Sallé*), Oaxaca (*Höge*), Jalapa (*Flohr*).

This species is very closely allied to *P. xanthomelas*, the male characters being the same; but *P. basiventris* will be readily identified by the two basal segments of the hind body being black instead of red, as well as by the very distant punctuation of the elytra; the black colour of the two basal segments is on the under surface only partial, the two segments being in greater part red beneath; though the breast is quite black, the legs, including all the coxæ except the hind ones, are clear yellow.

60. **Philonthus alternans.** (Tab. XI. fig. 7.)

Rufus; capite cum antennis, thorace, scutello abdominisque dimidio apicali nigris; pedibus testaceis, coxis anterioribus fuscis; elytris abdomineque parce punctatis.

Long. 10 millim.

Mas. Trochanteribus posterioribus elongatis, apice recurvo, femoribus basi angusta.

Fem. Trochanteribus femoribusque posterioribus simplicibus.

Hab. MEXICO, Jalapa (*Flohr*), Oaxaca (*Höge*).

Extremely similar to the largest specimens of *B. formosus*, but readily distinguished from them, as well as from its other allies, by there being three instead of two segments black at the apex of the hind body. Although the male trochanters are similar to those of *P. trochanterinus*, yet in *P. alternans* the terminal styles are simple, and the last ventral plate is not emarginate, agreeing in these respects with *P. zunilensis*.

I have seen only three examples. The figure is taken from one of two females sent by Mr. Flohr.

61. **Philonthus apiciventris.**

Rufus; capite cum antennis palpisque, thorace, scutello, mesosterno abdominisque apice summo nigris; pedibus cum coxis omnibus testaceis; elytris abdomineque parcius punctatis.
Long. 9 millim.
Mas. Trochanteribus posterioribus spina tenue armatis.

Hab. Mexico, Juquila (*Höge*).

Only a single example is before me, and though it has a very great resemblance to *Belonuchus formosus*, it can be readily distinguished by the fact that only the apical ventral segment and the armature is black; the sexual characters are quite different too from those of *B. formosus*. The example is presumed to be a male on account of the armature of the trochanters, though there is no other evidence of its sex visible; this armature consists of a fine slender spine placed at the apex of the trochanter, projecting at an acute angle from the direction of the femur and very slightly curved upwards; it is so slender that it may easily escape notice.

The black colour on the breast being quite confined to the mesosternum, and leaving all the coxæ clear yellow, may also readily escape notice, as it is concealed by the middle coxæ; the punctuation of the under face of the hind body is very much finer than in *B. formosus*.

62. **Philonthus oxyporinus.**

Rufus; capite cum antennis, thorace, scutello, mesosterno, coxis quatuor anterioribus abdominisque apice summo nigerrimis; elytris abdomineque parcius punctatis.
Long. 13 millim.

Hab. Mexico, Oaxaca (*Höge*).

This is another of the numerous species having a great resemblance to *Belonuchus formosus*, and is apparently—for only a solitary female has been obtained—the largest of these species; it has, however, only the armature and the hinder half of the terminal segment black, and the antennæ are a little thicker towards the apex than in the allies; the labial and maxillary palpi are piceous, with the terminal joint of each yellow. The much larger size and the black coxæ readily distinguish the insect from *P. apiciventris*.

It is possible that a knowledge of the male may show this to be near *Belonuchus pollens*; but I think it more probable it will prove to be an insect with peculiar trochanters rather than with spinose femora, as in this female the trochanters are large and prominent.

63. **Philonthus colon.**

Elongatus, nitidus, fulvo-rufus; capite cum antennis abdominisque segmentis duobus ultimis nigris, palpis piceis; elytris abdomineque parce punctatis.
Long. 11–13 millim.
Mas. Trochanteribus posterioribus acuminato-prolongatis, femoribus basi tenuiore; abdominis segmento ultimo ventrali producto, apice angulariter emarginato.

Hab. Mexico, Cordova (*Sallé*).

Antennæ rather stout, with the penultimate joints transverse. Head very deep shining black, broadly and deeply impressed along the middle in front, with numerous coarse large punctures, which, however, do not extend to the central space. Thorax brighter red than the rest of the surface, oblong, straight at the sides, and scarcely narrowed behind, the discoidal punctures rather large, and with four or five other punctures on each side. Elytra very sparsely punctate, as is also the hind body; both are of a tawny red colour, the two terminal segments of the latter and the armature deep black.

This species resembles the species of the *Belonuchus formosus* group, but has a red thorax, and is best placed near *P. trochanterinus*. The front femora are spinose in both sexes; the male, in addition to the characters mentioned above, has a rather peculiar structure of the terminal styles, which are rather broader, and furnished across the middle of the underside with a series of coarse setæ.

Only two examples are known, a small and very fragmentary male and a female.

64. **Philonthus xanthopus.**

Belonuchus xanthopus, Solsky, Hor. Soc. Ross. v. p. 139[1].

Mas. Mandibulis extus ad basin oblique dilatatis, femoribus anterioribus ultra medium longius spinosis, segmento ultimo ventrali parum conspicue sinuato-emarginato.

Hab. Mexico[1] (*Truqui*, *Flohr*), Jalapa, Oaxaca (*Höge*), Guanajuato (*Sallé*).

Although the male of this insect was unknown to Solsky, and it is not a *Belonuchus*, I have little doubt in identifying it as his species; it is, at any rate, the only one known to me to which his description can apply.

65. **Philonthus celatus.**

Niger, nitidus; elytris rufis, pedibus piceis, tarsis rufescentibus; elytris abdomineque parce punctatis.
Long. 9–11 millim.

Mas. Mandibulis extus ad basin oblique dilatatis, femoribus anterioribus ultra medium longius spinosis, segmento ultimo ventrali sinuato-emarginato.

Hab. Mexico, Mirador, Oaxaca, Tehuacan (*Höge*), Yolos, Cuernavaca (*Sallé*).

Head and thorax very black and shining; the former impressed on the middle in front, and with numerous coarse punctures at the sides; the latter oblong, slightly narrowed behind. Antennæ but little thickened externally, the penultimate joint as long as broad. Scutellum closely and coarsely punctate. Elytra shining, red, only sparingly and not coarsely punctured. Hind body intense black, shining, only sparsely punctate.

This is distinguished from *P. xanthopus* almost solely by the dark colour of the legs. The sexual characters are the same in these species as they are in *P. xanthomelas* and *P. basiventris*.

§ 6. *Thorax seriebus dorsalibus 6-punctatis* *.

66. **Philonthus misellus.**

Niger; elytris fuscis, abdominis segmentis posterioribus margine posteriore ferrugineo; mandibulis, palpis, antennarum basi pedibusque testaceis, his tibiis fuscis; capite suboblongo; abdomine crebre subtiliter punctato.
Long. 6 millim.

Hab. GUATEMALA near the city, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ moderately long, rather thicker externally, penultimate joint quite as long as broad. Head nearly as broad as the thorax; the latter nearly straight at the sides, scarcely at all narrowed in front. Elytra not longer than the thorax, neither closely nor coarsely punctate. Hind body narrowed at the apex, quite finely and not at all densely punctate. The male has the front tarsi simple, and a distinct though not large notch on the last ventral segment.

This species is very similar to the European *P. exiguus*, but has the head rather broader, and the male hinder tibiæ destitute of fringes; the terminal joint of the labial palpi is remarkably slender and quite linear. The colour varies somewhat; the elytra being in some examples ænescent, and the hind body sometimes darker and nearly black; in others the latter is more dilute and with distinct pale rings.

67. **Philonthus ovaticeps.**

Elongatus, niger; capite angustulo subovato; antennis fuscis, palpis pedibusque fusco-testaceis; abdomine sat crebre subtiliter punctato.
Long. 7 millim.

Hab. MEXICO, Las Vigas (*Flohr*).

Closely allied to *P. misellus*, but larger, and readily distinguished by the comparatively elongate and ovate shape of the head. The two species agree pretty closely in the male characters and in the shape of the last joint of the labial palpi.

68. **Philonthus rusticus.**

Niger; capite thoraceque nitidissimis nigro-æneis, elytris æneis nitidulis; pedibus testaceis, tibiis tarsisque fuscis; capite subquadrato; elytris parce fortiter, abdomine minus crebre subtiliter, punctatis.
Long. $6\frac{1}{2}$ millim.

Hab. MEXICO, Las Vigas (*Flohr*), Cordova (*Höge*).

This species is very closely allied to *P. misellus*, but is readily distinguished from that species by the broader head and the more brassy colour of the anterior parts. The head is large, in the male even broader than the thorax, and is slightly narrowed behind. The punctuation of the elytra is deep and definite and rather coarse. The male characters are similar to those of *P. misellus*.

* § 2 and § 3, antea p. 397, should stand as § 3, § 4, and § 4 p. 408 as § 5: see my remarks p. 396.

69. **Philonthus centralis.**

Nigricans; pedibus testaceis, tibiis tarsisque fuscis; capite subquadrato, elytris abdomineque crebrius subtiliter punctatis.
Long. 6½ millim.

Hab. Mexico, Jalapa (*Flohr*); Guatemala, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

Antennæ not elongate, the penultimate joints only about as long as broad. Elytra rather closely and finely, hind body still more finely and densely, punctate. The male has the head much broader, and the front of it semicircularly emarginate and with large clypeal membrane, the anterior tarsi rather strongly dilated, and a distinct notch on the last ventral plate; thus it greatly resembles *P. cavifrons* of Group 5. The female is very similar to *P. misellus*, but has the punctuation of the hind body denser, and the terminal joint of the labial palpi less slender. The hind tarsi are short, with stout basal joint, which is about equal in length to the terminal joint.

70. **Philonthus armatipes.**

Subdepressus, fusco-niger; capite thoraceque nigro-subæneis, elytris sordide æneis; antennis sat elongatis; capite lato, subquadrato; prothorace serie discoidali vel 6- vel 7-punctato; elytris abdomineque crebre subtiliter punctatis; tibiis tarsisque posterioribus setis longissimis armatis.
Long. 7½ millim.

Hab. Guatemala, near the city at an elevation of 5000 feet (*Champion*).

Antennæ rather slender, with all the joints longer than broad. Head broad, very shining, with numerous scattered coarse punctures, which are absent from a broad space along the middle in front. Thorax elongate, evidently narrowed behind; the discoidal series consists on each side of either five or six punctures, and an additional more remote one very close to the anterior margin. Scutellum very finely punctate. Elytra not longer than the thorax, not shining, rather closely but not coarsely punctate. Hind body finely and not closely punctate. Hind tibiæ armed externally about the middle with two rather long slender spinules, and also with some very fine long setæ; the upper of these, placed near the knee, are so elongate as to be nearly as long as the tibia; the basal joint of the corresponding tarsus also bears an extremely long seta.

Of this remarkable species I have four examples before me, three of which are apparently males, though they present no external marks of distinction from the fourth individual, which I believe to be a female.

71. **Philonthus serpens.** (Tab. X. fig. 21.)

Subdepressus, niger; pedibus fuscis; antennis sat elongatis; capite lato, subquadrato; elytris abdomineque crebre subtiliter punctatis; tibiis posterioribus externe setis tenuissimis elongatis armatis.
Long. 6 millim.

Hab. Guatemala, San Gerónimo, Torola (*Champion*); Panama, Volcan de Chiriqui 4000 to 6000 feet, Peña Blanca 3000 to 4000 feet (*Champion*).

This species is very closely allied to *P. armatipes*, but smaller, of blacker colour, with considerably shorter hind legs, whose tibiæ are without median spinules, and are only provided with about three very fine hairs, much shorter than those of *P. armatipes*; the basal joint of the hind tarsus also bears a very fine seta on its upper face at the apex, but it apparently varies in its development. The male has a small notch at the extremity of the last ventral plate.

The number and disposition of the tibial setæ is apparently variable in this species, or it may be that there are three or more very similar species differing in this respect; but as only one or two individuals have been received from each locality, I am unable to determine this point.

The example figured is from Peña Blanca; the setæ of the hind tibiæ are so delicate as to be only perceptible with a good and powerful lens, and thus are not indicated in our figure.

72. **Philonthus deplanatus.**

Subdepressus, piceus; capite suboblongo, thorace angusto quam elytra fere duplo angustiore, his subtiliter minus dense punctatis; abdomine crebre fortiter punctato.

Long. 10 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ pale piceous, moderately long, a little thickened externally, the penultimate joints not quite so long as broad, the fifth and sixth each about as long as broad. Head a little narrowed behind the eyes, which are slightly prominent; in front with a fine channel along the middle, behind with rather numerous distant coarse punctures. Thorax elongate and narrow, nearly straight at the sides, slightly narrower behind. Scutellum deeply and definitely punctate. Elytra broad, rather finely and sparingly punctate. Hind body with the base of each segment coarsely and closely, the hind part of each more finely and sparingly, punctate; the apical segments much more finely and sparingly punctured than the basal ones. Legs long and slender.

This is a very distinct species, of which only a single example of the female sex has been found. Although the punctures of the thoracic series are irregular, and do not agree in their positions on the two sides, yet I have little doubt it will prove to belong to this group.

73. **Philonthus macilentus.**

Angustulus, parallelus, fuscus; antennarum basi pedibusque testaceis, elytrorum sutura et apice rufo-obscuris; elytris abdomineque densissime punctatis; antennis elongatis.

Long. 6 millim.

Hab. MEXICO, Cordova (*Sallé*).

Var. Elytris læte rufis.

Hab. MEXICO, Las Vigas, Jalapa, Cerro de Plumas (*Höge*).

Head small, subquadrate, with the eyes occupying more than half of the length of the sides. Thorax straight at the sides, not narrowed behind. Scutellum densely and very obsoletely punctate. Elytra quite dull, very densely punctate, the hind margin and suture more rufescent than the other parts. Hind body very densely and finely punctate. Legs, including the coxæ, clear yellow.

The male has the front tarsi much dilated, and the last ventral plate marked with a moderately large notch behind.

Somewhat similar to the species of the *P. fulvipes* group; this insect is readily distinguished by the different shape of the head and by the rather larger eyes, and is more nearly allied to *P. corallipennis*, Sharp, which has, however, a different number of punctures in the thoracic series. As I can find no other difference of importance, I have treated the individuals with red wing-cases as no more than a variety.

This is one of a little group of species, distinguished by the shape of the head as described above, and by the very parallel-sided thorax, the longer of whose lateral setæ is placed close to the margin.

74. **Philonthus umbratus.**

Angustulus, subparallelus, fusco-niger; pedibus testaceis, antennarum basi fusco-testacea; scutello peropaco obsoletissime punctato; elytris dense, abdomine densissime, punctatis; antennis elongatis.
Long. 7 millim.

Hab. MEXICO, Las Vigas (*Höge*); GUATEMALA, Paso Antonio (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 4000 to 6000 feet, Peña Blanca 3000 to 4000 feet (*Champion*).

Very closely allied to *P. macilentus*, but of rather darker colour, and with the elytra less finely punctate.

75. **Philonthus prolixicornis.**

Angustulus, niger; elytris subæneis, pedibus testaceis, coxis antennarumque basi fuscis; elytris abdomineque densissime punctatis; antennis elongatis.
Long. 8 millim.

Hab. GUATEMALA, Torola (*Champion*).

This is another species very closely allied to *P. macilentus*, but readily distinguished by the metallic tint of the wing-cases. The antennæ are very elongate, the penultimate joint being much longer than broad. The scutellum is quite obsoletely punctate. The elytra and hind body are very densely punctate; the latter has the terminal segment and the bases of the anal styles pale sordid red.

Only one example has been found; it is a male, with the front tarsi moderately dilated, and a shallow notch on the last ventral plate.

76. **Philonthus solitarius.**

Fuscus; antennarum basi piceo-testacea, pedibus testaceis, tibiis infuscatis, segmentorum ventralium marginibus ferrugineis; capite oblongo-ovato, antennis minus elongatis; elytris abdomineque dense punctatis.
Long. 7 millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ not stout, rather short, penultimate joints not so long as broad. Head rather small, narrower than the thorax, the latter narrowed in front with the punctures of the discoidal series fine. Scutellum very indistinctly punctate, dull. Elytra densely and finely punctate, as is also the hind body. Legs with the coxæ yellow, the tibiæ more obscure.

This is apparently an obscure species of the *P. micans* group; only a single female has been found, having the front tarsi simple. It much resembles *P. macilentus*, but will be readily distinguished by the shorter antennæ, the less parallel form, the less dense and fine punctuation of the elytra and hind body.

77. **Philonthus tachiniformis.** (Tab. X. fig. 22.)

Staphylinus tachiniformis, Say, Trans. Am. Phil. Soc. iv. p. 450 [1].

Hab. Mexico [1] (*Truqui*), near the city of Mexico (*Sallé*), Las Vigas (*Flohr*), Jalapa (*Höge*).

The figure represents an example from Jalapa; the head is represented rather too large in comparison with the other parts of the body.

78. **Philonthus melancholicus.**

Nigerrimus; tarsis palpisque piceis; capite ovato, antennis sat elongatis; elytris abdomineque dense punctatis. Long. 10 millim.

Hab. Mexico, Capulalpam (*Sallé*).

Antennæ about as long as the head and thorax, thickened externally, penultimate joint about as long as broad, joints 4–8 each longer than broad. Head small, much narrower than the thorax; the latter very black and shining, and a good deal narrowed in front. Elytra densely punctate, not longer than the thorax, dull, black. Hind body very densely and rather finely punctate.

This is apparently extremely closely allied to *P. tachiniformis*, but is rather larger, and very different in appearance on account of its unicolorous dark colour. It is extremely similar also to a Californian insect labelled in my collection as being probably *P. californicus*, Mannerheim; but *P. melancholicus* is smaller, has a less elongate-ovate head, the antennæ a little shorter and externally thicker, and the hind angles of the thorax completely rounded.

Only one example, a female, has been obtained.

§ 7. *Thorax seriebus dorsalibus vel 7- vel multipunctatis.*

79. **Philonthus rectilaterus.** (Tab. X. fig. 23.)

Niger; capite thoraceque nigro-æneis, elytris fusco-æneis, pedibus fuscis, femoribus plus minusve flavescentibus

capite thoraceque subquadratis, illo ad angulos posteriores crebre fortiter punctato; elytris abdomineque crebre minus subtiliter punctatis, pallide fusco-pubescentibus.

Long. 8–9 millim.

Hab. MEXICO, Las Vigas (*Höge*); GUATEMALA, Dueñas (*Champion*).

Antennæ rather shorter than the head and thorax, with the penultimate joint not longer than broad. Head almost as broad as the thorax, with numerous very coarse punctures which do not cover the middle. Thorax about as long as broad, nearly straight at the sides, the discoidal series consisting of seven rather coarse punctures; there are also five other punctures on each side between the discoidal series and the margin. Scutellum densely punctate. Elytra rather closely and, though not coarsely, very definitely punctate, and of a dull brassy colour. Hind body rather coarsely punctate, the three basal segments each with a deep transverse impression. The middle coxæ are rather widely separated.

The male has the front tarsi broadly dilated, and a rather large notch on the last ventral plate; in the female the front tarsi are a little dilated. A female from Dueñas is figured.

80. **Philonthus atricolor.**

Niger, parum latus, subparallelus; pedibus piceis; capite oblongo-ovato; thorace serie dorsali circiter 7-punctato; elytris abdomineque crebrius punctatis.

Long. $7\frac{1}{2}$ millim.

Hab. MEXICO, Capulalpam (*Sallé*), Cerro de Plumas (*Höge*); GUATEMALA, Totonicapam 8500 to 10,000 feet (*Champion*).

Antennæ moderately long, scarcely thicker externally, the penultimate joint about as long as broad. Head rather long and narrow, nearly as broad as the thorax; the latter almost straight at the sides, just perceptibly narrowed in front, and, like the head, of an intense shining black colour. Scutellum dull, indistinctly punctate. Elytra about as long as the thorax, rather closely and, though not coarsely, very definitely punctate. Hind body finely and moderately closely punctate.

The male has quite simple front tarsi, and an extremely small emargination on the last ventral plate.

Four examples were found in Guatemala, and but two in Mexico; I find no specific difference in the specimens from the two localities, although those from Mexico have the antennæ paler and apparently a little more elongate and slender.

81. **Philonthus cribellatus.**

Philonthus cribellatus, Solsky, Hor. Soc. Ross. v. p. 137[1].

Hab. MEXICO[1].

82. **Philonthus duploseriatus.**

Philonthus duploseriatus, Solsky, Hor. Soc. Ross. v. p. 136 [1].

Hab. Mexico [1].

83. **Philonthus optatus.**

Rufus; capite cum antennis, thorace, scutello abdominisque apice nigris, palpis pedibusque testaceis; capite oblongo, fortiter punctato; thorace seriebus dorsalibus octo-punctatis.
Long. 10 millim.

Hab. Mexico, Guanajuato (*Sallé*).

Antennæ with three or four of the joints before the terminal one slightly transverse. The head is channelled in front, and bears numerous very coarse punctures, only a very small area on the middle being free from them. The thorax is oblong, straight at the sides, scarcely at all narrowed behind; obscurely canaliculate along the middle, and the eight punctures on each side forming the dorsal series coarse and deep. The scutellum is densely punctate. The elytra are bright red and rather sparingly punctured. The hind body is quite sparingly punctate, with the armature, the terminal and the greater part of the penultimate segments, black.

This insect bears the greatest resemblance to *Belonuchus formosus*, and was labelled with that name in Sallé's collection, but the head and thorax are quite different. Only a single female example is known.

84. **Philonthus punctifer.**

Philonthus punctifer, Nordm. Symb. p. 107 [1]; Er. Gen. et Spec. p. 498 [2].

Hab. Mexico [1 2]; Costa Rica (*Van Patten*).

I have not seen any example I can refer to this species, other than one labelled as found by Van Patten in Costa Rica; it does not agree very satisfactorily with the descriptions of Nordmann and Erichson (made, I believe, from one and the same example), and perhaps may prove not to be entitled to the name I assign to it at present.

85. **Philonthus discretus.** (Tab. X. fig. 24.)

Philonthus discretus, Sharp, Trans. Ent. Soc. 1876, p. 428 [1].

Hab. Mexico [1] (*Flohr*), Las Vigas, Jalapa (*Höge*).

Of this remarkable species a male example from Jalapa is represented on our Plate.

86. **Philonthus championi.** (Tab. X. fig. 25.)

Gracilis, niger; antennarum basi pedibusque piceis; capite subquadrato, crebrius subtiliter punctato; antennis elongatis; prothorace elongato, posterius angustato, serie discoidali irregulariter circiter 8-punctato; elytris abdomineque crebrius sat subtiliter punctatis.
Long. 8 millim.

Hab. Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

This is allied structurally to *P. serpens* of the preceding group, but is readily distinguished by the sculpture of the head, which consists of a rather fine but not dense punctuation covering all the surface except a very fine space on the middle. The rather slender thorax is conspicuously narrowed behind, and the anterior angles are greatly depressed and rounded; the elongate lateral seta is placed at a distance from the side margin, and there are only six or seven punctures on each side in addition to the discoidal series. The male has apparently no external mark of its sex, and the front tarsi are quite slender.

Only three examples, unfortunately in bad preservation, have been met with; in the figure the antennæ should have been more slender than they are represented.

This and the two following species have the basal joint of the hind tarsi much shorter than the apical joint, and there can be little doubt they will prove entitled to generic isolation, possibly in combination with *P. serpens* and its allies, though in these latter the basal joint of the tarsus is not so much shortened.

87. **Philonthus approximans.**

Gracilis, nigerrimus; capite subquadrato, crebrius subtiliter punctato; antennis elongatis; prothorace elongato, angusto, quam elytra multo angustiore, posterius fortiter angustato, serie discoidali circiter 8-punctato; elytris abdomineque crebrius minus subtiliter punctatis.

Long. 7 millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This, to judge from a single example in bad preservation, is a species very closely allied to *P. championi*, but of intense black colour, with more slender thorax, and rather coarser punctuation.

88. **Philonthus elegans.**

Gracilis, niger; antennarum basi pedibusque piceis; capite suboblongo, crebrius subtiliter punctato; antennis elongatis; prothorace elongato, gracili, quam elytra fere duplo angustiore, posterius fortiter angustato, serie discoidali irregulariter circiter 8-punctato; elytris crebrius profunde fortiter punctatis; abdomine crebre sat fortiter punctato.

Long. 7 millim.

Hab. Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

Though rather closely allied to *P. championi*, this species will readily be recognized by the narrow head and thorax, and the coarser and very definite punctuation of the elytra.

Only one example has been met with.

BELONUCHUS.

Belonuchus, Nordmann, Staph. p. 129, t. 2. f. 2; Er. Gen. et Spec. p. 419.

As already remarked (*ante* p. 396), this genus is at present systematically distin-

guished from *Philonthus* only by the anterior and posterior femora being spinose beneath. It has, however, hitherto escaped the attention of writers that this character in certain of the species is confined to the male sex, and even in this sex varies greatly in its development according to the species, and in the case of some species is subject even to individual variation. This remark applies to the armature of the posterior femora only, for that of the front legs is so very variable both in *Philonthus* and *Belonuchus* that no reliance can at present be placed on it as a generic character. It would thus almost appear that the proper course would be to merge *Belonuchus* into *Philonthus*; but it is very undesirable to adopt such a course in a faunistic work, and it is also well to avoid, if possible, increasing the bulk of a genus already so unwieldy as is *Philonthus*. Moreover, there are characters which will cause *Belonuchus* to be recognized as valid when *Philonthus* is divided, as it will ultimately be. In *Philonthus* it is very rarely the case that the posterior femora are spinose, and in the few species where we find this there is but a single series of spines, whereas in *Belonuchus* there are always two series, one on each of the ridges existing on the posterior face of the femur. The species of *Belonuchus*, too, have, without exception, the lateral margin of the thorax so much inflexed that it is remote from the longer of the lateral tactile setæ.

Belonuchus comprises about forty species besides the new ones here defined, and is characteristic of the Tropical-American fauna, two or three species only extending their range to the United States of North America; a few species have also been recorded from the Austro-Malay region, but these are doubtfully congeneric with the New World forms.

1. **Belonuchus cognatus.** (Tab. XI. fig. 9.)

Elongatus, depressus, nitidulus, nigerrimus; abdominis segmentis duobus ultimis rufis.
Long. 11–13 millim.

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, El Reposo, Las Mercedes, San Isidro, Mirandilla (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba (*Champion*).

This insect is exactly similar to *B. hæmorrhoidalis*, Er., except that the two terminal segments, as well as the armature, are entirely reddish yellow; as this difference is without variation in a large series of examples, it is probably a mark of specific difference.

2. **Belonuchus dichrous.**

Belonuchus dichrous, Erichson, Gen. et Spec. p. 420[1].

Hab. Mexico, Orizaba[1], Cordova, Tuxtla, Playa Vicente (*Sallé*), Oaxaca, Mirador (*Höge*), Jalapa (*Flohr*, *Höge*); Guatemala, near the city, Las Mercedes (*Champion*).

This insect, Mr. Champion informs me, is found under bark still saturated with sap.

3. **Belonuchus alternatus.** (Tab. XI. fig. 10.)

Elongatus, depressus, nitidus, rufus; capite cum antennis abdominisque segmentis tribus nigris, abdominis apice flavo.
Long. 11 millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

Antennæ blackish, with the terminal joint ferruginous; palpi red, the second joint of the maxillary pair piceous. Head black, without sericeous reflection. Thorax rather bright red, without sericeous reflection; elytra paler red, as also the two basal abdominal segments; the three next segments deep black; the hind margin of the penultimate segment, the whole of the terminal segment, and the armature clear yellow.

This is excessively closely allied to *B. dichrous*, but differs in having the two basal segments of the hind body red, and in some of the minute details of colour, such as the absence of the peculiar reflections seen in certain lights on the head and thorax of the former species. There is scarcely any external difference between the sexes perceptible. The figure is taken from a small female found at Bugaba.

4. **Belonuchus flavipennis.**

Belonuchus flavipennis, Solsky, Bull. Soc. Mosc. 1868, xlii. p. 263 [1].

Hab. MEXICO [1] (*Flohr*, *Sallé*), Mirador, Oaxaca (*Höge*).

Although very similar to *Philonthus celatus* and to *Belonuchus simplex*, this species is readily distinguished, when fully extended, by the fact that the medial lobe of the armature and the bases of the anal styles are white; the thoracic series is regularly quadripunctate, the punctures being placed on the front half of the thorax, and the surface of the head and thorax present a remarkably conspicuous sericeous reflection. The male is still unknown.

Apparently rare, only one example being present from each source.

5. **Belonuchus bidens.** (Tab. XI. fig. 11.)

Niger; pectore elytrisque rufis, abdominis apice pallide flavo; antennarum basi apiceque, palpis pedibusque testaceis.
Long. 13 millim.

Hab. MEXICO, Jalapa (*Flohr*), Oaxaca, Mirador (*Höge*), Tuxtla (*Sallé*); NICARAGUA, Chontales (*Belt*).

Mandibles very elongate, piceous. Antennæ short, the penultimate joints rather strongly transverse, the three basal joints and the terminal one yellow. Head transversely subquadrate, black, very coarsely punctate, with a broad space on the middle impunctate. Thorax short, quadrate, slightly narrowed behind, on each side of the

middle with a discoidal series of five punctures. Elytra and hind body rather sparingly and finely punctate; the latter with rather more than one half of the penultimate segment, the whole of the terminal segment, and the armature pallid yellow. In the male the clypeus is produced on either side in the middle so as to form a short thick projection or tooth; the front femora are dilated behind near the extremity, and coarsely spinose; the hind femora densely set with two series of closely placed spines; the terminal ventral plate scarcely emarginate.

Very closely allied to *B. xanthopterus*, but rather smaller, and with less punctate and setose hind body, and with the head in the male different, and also with a larger extent of the penultimate segment pale.

6. **Belonuchus formosus.**

Staphylinus formosus, Grav. Mon. p. 72 [1].
Belonuchus formosus, Er. Gen. et Spec. p. 426 [2].

Hab. United States, Carolina [1], Pennsylvania.—Mexico, Jalapa (*Flohr*, *Höge*), Oaxaca (*Sallé*, *Höge*), Teapa, Capulalpam, Playa Vicente (*Sallé*); British Honduras, Rio Hondo (*Blancaneaux*); Guatemala (*Salvin*), near the city, San Gerónimo, Capetillo, Cahabon in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba (*Champion*).—South America, Colombia [2], Brazil.

There are three varieties of this species, viz.:—1. A very small form, as described by Gravenhorst [1], slender, with fuscous antennæ, the base and apex of which are more or less indefinitely paler, the palpi entirely clear yellow, and the hind femora of the male with their armature so much reduced that the few spines are not easily perceived; this variety I have seen only from Mexico and the United States. 2. The most common form has the antennæ black, with the base more or less picescent, as are also the palpi, these latter, however, being sometimes nearly yellow, with the exception of the basal joints of the labial pair, which are always picescent. 3. A variety with the base and apex of the antennæ definitely yellow, and the palpi entirely clear yellow, the punctuation of the elytra rather closer and finer, and the setosity of the penultimate segment greater; these two latter varieties occur from Mexico to Brazil. It has hitherto escaped record that the hind femora of the female are unarmed. The species is recorded in the Munich Catalogue under the name of *B. rufipennis*, Fabr., Erichson having stated that the Fabrician type of *Staphylinus rufipennis* is the present species; the description of Fabricius is, however, so definitely erroneous that his name cannot be adopted, for he not only omits to mention the red hind body, but reiterates "corpus atrum."

7. **Belonuchus pollens.**

Rufus; capite cum antennis, thorace, scutello, pectore anterius, coxis quatuor anterioribus abdominisque segmentis duobus ultimis nigris; palpis piceis; elytris parce, abdomine crebrius, punctatis.
Long. 11–14 millim.
Mas. Femoribus posterioribus tantum ad basin rude spinosis.

Hab. North America (*coll. Castelnau*).—Mexico, Oaxaca (*Höge*); Guatemala (*Salvin*), near the city (*Champion*); Honduras (*Sallé*).

This is similarly coloured on the upper surface to *Belonuchus formosus*, but beneath the anterior part of the breast and the four front coxæ are black; it is also much larger than *B. formosus*, and the spines on the hind femora of the male consist of a few closely placed, and confined to the basal third of the femur. The male has only a slight emargination on the last ventral plate.

Although the male characters of this species and *Philonthus xanthomelas* are so different, I am not able to point out any certain character for distinguishing the females of the two; usually in *P. xanthomelas* the metasternum is black, but I have one male individual in which it is red, and if a similar variety should occur in the female I do not see how it could be distinguished from *B. pollens*.

The locality North America is given on the authority of an example from Castelnau's collection labelled "*Philonthus extremus*, Chev., Am. bor."

8. **Belonuchus iridescens.**

Belonuchus iridescens, Solsky, Hor. Soc. Ross. v. p. 140 [1].

Hab. Mexico [1].

9. **Belonuchus erythropterus.** (Tab. XI. fig. 13.)

Belonuchus erythropterus, Solsky, Hor. Soc. Ross. v. p. 137 [1].

Hab. Mexico [1], Oaxaca (*Höge*), Guanajuato, Cuernavaca, Puebla (*Sallé*).—Venezuela (*coll. Sharp*).

A large series of this species, varying excessively in size and development, from 11 to 21 millim. in length, was met with by Höge. The male characters are but slight, confined, in fact, to an emargination of the apical ventral plate; the other abdominal characters mentioned by Solsky as indicating this sex being only visible in certain individuals, and dependent on slight peculiarities of the shape and sculpture of the hind body, both of which are very remarkable in this species. Sallé considers the species in his collection to be Say's *Staphylinus ephippiatus*.

The figure is that of a large variety of the male from Guanajuato, in which the last segment is scarcely emarginate.

10. **Belonuchus simplex.**

Nigerrimus; elytris rufis; abdomine crebre punctato, haud dilatato, punctis setigeris conspicuis tamen nec grossis.

Long. 10–15 millim.

Hab. Mexico, Oaxaca (*Höge*), Vera Cruz (*coll. Castelnau*).

Extremely similar to *B. erythropterus*, but with the hind body of normal shape and

sculpture, more closely and finely punctate on the upper surface, especially on the base of each segment, and beneath much more finely punctate. The male has only an excessively slight emargination of the last ventral plate. The absence of punctuation on a narrow space along the middle of each of the two terminal segments is more conspicuous in this species than in *B. erythropterus*, and it is probable that Solsky's general description of *B. erythropterus* was taken from that species, but the male characters from an example of *B. simplex*.

I have seen only four examples of *B. simplex*.

11. **Belonuchus ephippiatus.**

Staphylinus ephippiatus, Say, Trans. Am. Phil. Soc. iv. p. 448 [1].
Belonuchus ephippiatus, Lec. in Say's Insects of North America, ii. p. 563 [2].

Hab. North America, San Diego [2] (*Leconte*), Arizona (*Horn*).—Mexico [1].

I have no evidence that the species sent me by Dr. Horn is really found in our region, and it is quite uncertain whether it is really the *S. ephippiatus*, Say; the responsibility of the identification rests, therefore, with the North-American savants. Say's description is very vague, but I think it more probable that Sallé's identification of it with *B. erythropterus*, Solsky, is correct.

The Arizonan insect is excessively close to *B. simplex*, but has a densely punctate hind body, and more closely punctured and less shining wing-cases.

12. **Belonuchus connexus.**

Staphylinus connexus, Say, Trans. Am. Phil. Soc. iv. p. 448 [1].
Belonuchus connexus, Munich Cat. Col. ii. p. 596 [2].

Hab. Mexico [1].

This species cannot be identified from description with any certainty; it might be either a variety of *B. erythropterus*, *B. simplex*, *B. ephippiatus*, *Philonthus xanthopus*, or *P. celatus*.

13. **Belonuchus dejectus.** (Tab. XI. fig. 12.)

Depressus, niger, nitidus; elytris viridescentibus vel cyaneo-nigris; prothorace posterius fortiter angustato, seriebus discoidalibus subtiliter 5-punctatis; abdomine segmentis 2°–4^{m} basi transversim depresso et rugulose-punctato.

Mas, Trochanteribus posterioribus plus minusve prolongatis.

Long. 7–8 millim.

Hab. Mexico (*Truqui*, *Flohr*), Cordova (*Sallé*), Jalapa, Las Vigas, Mirador (*Höge*); Guatemala, Capetillo, Cerro Zunil, Balheu, Tamahu, San Joaquin, Purula, El Tumbador, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Head large, broader than the thorax, very intense black and shining, with an irregular

series of punctures extending transversely across the front part; elsewhere with only a few rather fine punctures, about five to seven on each side. Antennæ inserted on the front of the clypeus, rather short and stout, thicker externally, with joints 6–10 transverse. Scutellum densely and rather finely punctate. Elytra shining, sparsely and rather finely punctate. Hind body rather slender, moderately closely punctate.

This is one of a group of species, of which it may serve as the type, of depressed form, and with the punctures on the head peculiar, there being more than usual on the front part, and less than usual near the hind angles; the hind femora are armed with only a few short distant spines, and the front femora unarmed, the sexes agreeing in these respects.

B. dejectus is one of the commoner Staphylinidæ of our region, and varies somewhat in size, in the colour of the wing-cases, and in the prolongation of the hind trochanters of the male; this last is very slight indeed in the smaller of the Mexican and Guatemalan examples, but becomes very remarkable in the large examples from the Volcan de Chiriqui. I have received the species from M. Fauvel, with the MS. name of *Belonuchus biarti*.

The figure represents a female example from the Volcan de Chiriqui.

14. **Belonuchus stenoderus.**

Depressus, gracilis, omnium nigerrimus, nitidus; mandibulis, palpis antennarumque basi piceis; prothorace gracili, posterius fortiter angustato, seriebus discoidalibus subtiliter 5-punctatis; elytris abdomineque parce punctatis, hoc segmentis 2°–4ᵐ basi transversim depressis et crenato-punctatis.

Long. 5–6 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ short, thickened externally; the two basal and the apical joints slightly paler than the rest. Head large and broad, quadrate, with the hind angles rounded. Elytra much broader, but not longer, than the thorax. Hind body slender, shining black, somewhat coarsely punctate.

This is smaller and more slender than *B. dejectus*, and is readily distinguished by the black elytra, not longer than the thorax. The male has a small notch at the extremity of the last ventral plate.

Four examples have been found.

15. **Belonuchus panamensis.**

Depressus, nigerrimus, nitidus; prothorace posterius fortiter angustato, seriebus discoidalibus sæpius 4-punctatis abdomine elytrisque dense punctatis.

Long. 9 millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui, Bugaba, Tolé (*Champion*).

This is closely allied to *B. dejectus*, but is readily distinguished by numerous details.

The antennæ are but little thickened externally, the penultimate joints less transverse than in *B. dejectus*; the palpi are black or piceous; the thorax is elongate, and the dorsal series of punctures in the examples before me never have more than four punctures, the hinder one of which is separated by a larger space from the others; the hind body is densely punctate, and only shows in a very obsolete manner the rugose punctuation that is so conspicuous on the base of each of the basal segments of *B. dejectus*; the armature is of a lurid red colour.

There is apparently no distinction between the male and the female, except a slight notch on the apical ventral segment of the former.

A small series was found on the Volcan de Chiriqui, but only single examples were obtained at Tolé and Chontales, and a pair at Bugaba.

16. **Belonuchus docilis.**

Depressus, minus elongatus, nigerrimus, nitidus; antennarum basi palpisque rufis; prothorace posterius fortiter angustato, seriebus discoidalibus sæpius 4-punctatis; abdomine elytrisque densius punctatis.
Long. 7–8 millim.

Hab. Guatemala, Pantaleon (*Champion*); Panama, Bugaba, Tolé (*Champion*).

Antennæ short and stout, the penultimate joints very strongly transverse, the two or three basal joints red. Elytra and scutellum densely and finely punctured. Hind body densely punctate, the two penultimate segments more densely and coarsely setose. Anal styles black.

This is readily distinguished from the two preceding species, to which it is closely allied, by the less slender form, and by the bright colour of the base of the antennæ and palpi, as well as by the denser setosity visible on the two segments before the last one. I see no male characters, except a small notch on the last ventral plate.

17. **Belonuchus boops.**

Gracilis, depressus, nigerrimus, nitidus; femoribus piceis; prothorace posterius fortiter angustato, seriebus discoidalibus 4-punctatis; elytris abdomineque dense punctatis.
Long. 7 millim.

Hab. Panama, Bugaba (*Champion*).

Rather more slender than *B. dejectus*, and differing from it and the other allies in that the head is narrower in proportion to the length, and the eyes are more prominent. The punctuation of the elytra, scutellum, and hind body is close and fine, resembling in these respects *B. panamensis*; the medial lobe of the armature and the bases of the styles are pallid yellow, the apices of the latter fuscous.

Only one pair has been found; the male differs from the female by the three basal joints of the antennæ being shorter and thicker, and by the existence of a very small emargination on the last ventral plate.

18. **Belonuchus mexicanus.**

Belonuchus mexicanus, Solsky, Bull. Soc. Mosc. 1864, i. p. 440[1].

Hab. Mexico[1].

Though I have seen no insect answering to this description, I believe it will prove to be an ally of *B. dejectus*.

19. **Belonuchus mimeticus.** (Tab. XI. fig. 14.)

Subdepressus, rufus, nitidus; capite æneo, antennis in medio fuscis; antennarum basi, ore pedibusque testaceis; elytris dimidio apicali nigricante; abdomine ante apicem nigro, apice flavo.
Long. 7–7½ millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Antennæ moderately long; the three basal joints yellow, the next six fuscous, the two terminal fuscous yellow; the tenth joint about as long as broad. Mandibles and palpi yellow. Head short and broad, of a dusky-brassy colour, but very shining, with a few coarse punctures about the hind angles. Thorax rather short, yellow-red, much narrowed behind, a little produced in the middle in front, on each side of the middle with a discoidal series of five large punctures, and with four or five other punctures near the front angle. Elytra coarsely punctate, fulvous-red, with the apical portion broadly and indefinitely black. Basal segments of the hind body sparingly punctate; terminal segment pale yellow, the two preceding it black, but the hind margin of the penultimate yellow; the black parts rather coarsely setose; apices of anal styles fuscous.

The male has a minute prominent tooth on each side of the clypeus in front; the anterior and posterior femora spinose, and a broad shallow emargination on the ventral plate of the last segment. The femora of the female are without spines.

20. **Belonuchus pictipennis.**

Subdepressus, rufus, nitidus; capite æneo, antennis fusco-rufis, harum basi, ore pedibusque testaceis; elytris ad apicem macula magna nigra; abdomine ante apicem nigro, apice flavo.
Long. 8 millim.

Hab. Panama, Bugaba (*Champion*).

This is very closely allied to *B. mimeticus*, but is rather larger, and the black colour on the elytra forms a definite spot limited to a smaller space.

The male has a very broad head, without teeth on the clypeus; the femora very strongly armed with long spines; the emargination on the apical segment very slight; and the palpi extremely elongate.

Only two males have been found.

21. **Belonuchus similis.** (Tab. XI. fig. 15.)

Rufus; capite thoraceque nigro-æneis, nitidissimis; antennarum medio, elytrorum postico abdominisque fascia

ante apicem, nigris; pedibus abdominisque apice testaceis; elytris crebrius ad basin dense subtiliter punctatis.

Long. 8 millim.

Hab. Panama, Volcan de Chiriqui between 2500 and 6000 feet (*Champion*).

This is closely allied to *B. mimeticus* and *B. pictipennis*, though readily distinguished by the metallic colour of the head and thorax, and the longer and more closely punctate elytra, the punctuation being at the extreme base dense and fine.

The male has six or seven short spines on the front femora, and two series of spines on the hind femora, and also a broad shallow emargination of the hind margin of the last ventral plate; the female has only one or two spines on the front femora, the hind legs being unarmed.

Only three examples of *B. similis* have been found; the figure is that of a female. As will be seen on reference to the plates, this species bears an excessive resemblance to *Pæderomimus pectoralis*.

CHROAPTOMUS.

Antennæ longe post capitis marginem anteriorem insertæ. Prothoracis seta lateralis elongata ad marginem lateralem propinqua. Palpi maxillares articulo secundo dilatato. Tarsi posteriores tenues, elongati, articulo basali quam articulus apicalis longiore.

Although the *Philonthus flagrans*, Er., has remained associated with the other *Philonthi*, yet as it differs from all the species of that genus known to me by the antennæ being inserted in large fossæ so as to be remote from the front margin, and by the remarkable characters of the male, these latter having, however, hitherto escaped observation, it must clearly form a separate genus. Whether the Brazilian *P. cælites*, Er., should be associated with it I do not know, the insect being unknown to me.

1. **Chroaptomus flagrans.**

Philonthus flagrans, Er. Gen. et Spec. Staph. p. 441 [1].

Mas, Capite in medio anterius argute foveolato, labro fisso, opaco, in medio membranaceo.
Fem. Capite in medio anterius foveolato, labro nitido, dimidiis haud distantibus.

Hab. Mexico [1], Mirador (*Höge*), Cordova (*Sallé*), Jalapa (*Flohr*); Guatemala, Balheu, San Gerónimo, Cerro Zunil 4000 to 5000 feet (*Champion*); Costa Rica (*Van Patten*); Panama, Volcan de Chiriqui below 4000 feet, Boquete 3500 feet, Caldera 1200 feet, (*Champion*).—South America, Colombia [1] (*Mus. Sharp*), Venezuela.

This is occasionally met with in great abundance; Mr. Champion found it flying about rotten fruits in the forest. A variety occurs in which the head of the male is rather larger, with the anterior impression large and deep and occasionally even punctate behind.

2. **Chroaptomus regalis.** (Tab. XI. fig. 8.)

Parce punctatus, nitidus, niger; capite thoraceque violaceis; elytris splendidis viridi-auratis vel purpureis.
Mas. Capite latiore, anterius in medio depresso et coriaceo-opaco, minute foveolato; labro fisso, opaco, in medio late membranaceo.
Fem. Capite in medio potius late canaliculato, vix foveolato; labro nitido, dimidiis haud distantibus.
Long. 14 millim.

Hab. PANAMA, Bugaba 800 to 1500 feet, Volcan de Chiriqui 4000 to 6000 feet, Caldera 1200 feet (*Champion*).

Very closely allied to *C. flagrans*, but rather larger and broader, and with the head in the male differently formed in front.

About two dozen examples were captured in the State of Panama; although so extremely similar to *P. flagrans*, I have no doubt of its being distinct, as I have examined more than 150 individuals of the latter species without finding any intermediate. A male from the Volcan de Chiriqui is figured.

PÆDEROMIMUS.

Corpus gracile, læte coloratum. Prosternum ante coxas carinato-divisum. Prothorax linea elevata laterali valde deflexa superne invisa, a seta laterali longe remota. Coxæ intermediæ distantes.

This genus is established for some elegant insects peculiar to the Tropical-American fauna, the few species hitherto known having been placed with *Philonthus*—from which genus they may be distinguished by the fact that the prosternum in front of the coxæ is definitely divided transversely into two parts, which have a different texture, the posterior portion being frequently strigose, and serving probably in conjunction with the coxæ as a more or less rudimentary organ of stridulation. The side piece of the prothorax is small, and is not inflexed as in *Philonthus*. The genus comprises, in addition to the species enumerated in the following pages, *P. lætus* and *P. lustralis*, Er., and *P. æniceps*, *cognatus*, *traili*, *capitalis*, *lustrator*, *æneicollis*, *palpalis*, *aberrans*, *conformis*, *propinquus*, *regellus*, *abactus*, and *longipes*, Sharp.

There are three groups of species in the genus, viz.:—1. The first seven species of the following series; these are comparatively large and beautifully variegated insects, having slender and elongate palpi, the middle joint of the labial pair being more or less elongate, and longer than the terminal joint, while the basal joint of the hind tarsus is, though elongate, more or less shorter than the apical joint. *P. nigrinus* is a very aberrant species described from a mutilated example, and not apparently a member of either of the groups. 2. A group comprising the species numbered 9 to 13, and of which *P. angularius*, Er., may be taken as the type; they are rather depressed and less elongate insects, with the thorax truncate or nearly so in front, its anterior angles distinct, the transverse division of the thorax less marked, the palpi rather slender, but the intermediate joint of the labial pair not longer than the terminal joint, and the basal joint of the hind foot about equal to the apical; this group approaches closely to some of the *Belonuchi*, but is also nearly allied to the next by *P. simplex*. 3. A group for

which, if the genus be divided, the name *Pæderomimus* may be retained, and of which *P. difformiceps* may be taken as the type; it comprises the remainder of the genus; they are graceful insects of slender and not depressed form; the thorax has the front angles rounded and its upper surface prolonged, so that the anterior margin appears also more or less rounded; the prosternum is very definitely divided; the middle joint of the labial palpus not longer than the apical; the joints of the hind tarsi vary in their proportional lengths, but the basal joint is usually more or less incrassate. In this group certain of the species exhibit extraordinary and incomprehensible sexual differences in the structure and sculpture of the head and trophi, which, if they extended to both sexes, would be amply sufficient for the generic separation of each of the species displaying them.

Mr. Champion informs me that most of the species of this genus met with by him were found about moss or fungi attached to the trunks of decaying or fallen trees in the forests; one or two species were, however, met with under decaying leaves on the sandy banks of the streams.

1. **Pæderomimus gentilis.** (Tab. XI. fig. 17.)

Elongatus, rufus; capite, elytris (basi excepta) abdominisque apice nigris; antennis in medio fuscis; prothorace elongato, anterius truncato, seriebus discoidalibus subtiliter 5-punctatis.
Long. 11 millim.

Hab. Mexico, Cerro de Plumas, Jalapa (*Höge*).

Head suborbicular, with distant punctures at the sides. Antennæ rather long, the three basal joints red, the following six fuscous, the two terminal ferruginous. Palpi and mandibles red. Thorax nearly straight at the sides, a little narrowed behind, bright red, smooth, and shining; the punctures of the dorsal series are five on each side, and are rather fine, and besides these there are about six other fine punctures on each side. Scutellum red, densely punctate. Elytra rather closely and deeply but not coarsely punctate, black; the base, as far back as the apex of the scutellum, pale red. Hind body elongate, reddish yellow, very sparingly and finely punctate; the penultimate segment, and the hinder part of the antepenultimate, black; the hind margin of the penultimate and the greater part of the terminal segment pale yellow, but the hind margin of the latter as well as the anal styles black.

Though similar in colour to *P. angusticollis*, Er., this is readily distinguished by the different shape and punctuation of the thorax. Only three examples have been found, which may perhaps be all females; the one figured is that from Jalapa.

2. **Pæderomimus mandibularis.**

Rufus; capite, elytrorum dimidio apicali, abdomine ante apicem antennisque nigris, his basi rufa; elytris parce punctatis; thorace seriebus discoidalibus 5-punctatis.
Long. 10 millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ rather elongate; the basal joint, and the base of each of the two following joints, red. Mandibles and palpi elongate, clear red. Head with very numerous coarse punctures, but with a space smooth along the middle. Thorax a good deal narrowed behind, the serial punctures moderately coarse. Elytra shining; broadly red at the base, reddish along the suture, and with the hind margin very narrowly flavescent, elsewhere black; sparingly and not very coarsely punctate. Hind body broadly red at the base, then black, the apical segment yellow, the anal styles black. The hind femora are slightly infuscate externally. Although closely allied to *P. gentilis* this species has numerous slight points of distinction, and the very much more sparing punctuation of the elytra makes it distinguishable at a glance.

Only one example has been found; it is a male, with a few spines on the middle of the front femora, and a broad, rather deep notch on the last ventral plate.

3. **Pæderomimus chontalensis.**

Rufus; capite, elytris (basi excepta), abdomine ante apicem antennisque in medio nigris, his articulis duobus ultimis cum abdominis apice pallide flavis; elytris ad angulos exteriores breviter flavescentibus, parce punctatis; prothorace seriebus discoidalibus minus subtiliter 5-punctatis.

Long. 9 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ rather elongate and slender; the three basal joints red, the next six black, the terminal two pale yellow. Head black, with moderately numerous coarse punctures. Anal styles pale fuscous at the extremity.

This is another ally of *P. gentilis*, from which it is readily distinguished by the less elongate thorax with coarser punctures, and by the more sparingly punctate elytra. These points bring it near to *P. mandibularis*, with which it cannot, however, be united on account of the two pallid terminal joints to the antennæ.

Only one example, a female, has been found; it has no spines on any of the femora.

4. **Pæderomimus salvini.** (Tab. XI. fig. 18.)

Rufus; elytris (basi excepta), pectore, abdomine ante apicem antennarumque medio nigris; elytris minus crebre punctatis.

Long. 10 millim.

Hab. PANAMA, Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ elongate and slender; the three basal joints red, the next six black, the two terminal joints ferruginous. Head with a few coarse punctures behind. Thorax narrowed behind, only moderately long, the dorsal series consisting of five rather fine punctures, and also with about five other punctures of similar size on each side. Scutellum densely punctate, red. Elytra black, with a rather narrow red fascia at the base, each

outer hind angle yellow. Hind body red, with the two penultimate segments black, the hind margin of the latter, together with the terminal segment, yellow; the armature also is yellow, the setæ by which the middle lobe and the styles are terminated being, however, blackish.

The male has the front femora furnished in the middle beneath with a few spines, and the last ventral plate emarginate by a broad moderately deep notch.

5. **Pæderomimus capitatus.**

Rufus, nitidus; capite abdominisque fascia lata ante apicem nigris; antennis fuscis, basi picea; elytris nitidis, sat crebre punctatis; prothorace seriebus discoidalibus 5-punctatis.
Long. 10½ millim.

Hab. Mexico, Jalapa (*Flohr*, *Höge*), Playa Vicente (*Höge*).

Antennæ evidently thicker externally; the basal joints elongate; after the middle each joint is conspicuously shorter than its predecessor, so that the penultimate joint is transverse; the terminal joint not elongate. Mandibles and palpi red. Thorax bright red, its punctures not coarse. Elytra shining, rather dilute red, rather sparingly punctate. Hind body red at the base, but with the two or three (or even four) penultimate segments black or blackish; the hind margin of the penultimate and the greater part of the terminal segment, yellow, the latter as well as the anal styles infuscate behind; legs yellow.

The colour and sculpture of the elytra and the structure of the antennæ readily distinguish this species from *P. gentilis*, of which it is an ally. The colour of the base of the antennæ, and the extent of the black abdominal fascia, is apparently variable; but I have seen only four examples: one of these is a male, and has about six spines on the front femora, none on the hind; the extremity of its hind body has been destroyed; the femora of the female are unarmed.

6. **Pæderomimus hilaris.** (Tab. XI. fig. 19.)

Sanguineo-rufus; capite thoraceque viridi-cyaneis, nitidissimis; abdominis elytrorumque posticis nigris; antennis in medio nigricantibus, articulis duobus externis flavis; prothorace seriebus dorsalibus 5-punctatis.
Long. 9 millim.

Hab. Panama, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ rather elongate; the three basal joints red, the next six nearly black, the two terminal joints yellow; the penultimate joint a little longer than broad. Mandibles and palpi red. Head and thorax very brilliant, blue-green in colour; the former rounded and narrowed behind the eyes, with rather numerous punctures about the sides; the thorax slender. Scutellum with a few coarse punctures on the middle. Elytra with only very distant punctures, very shining, the basal half red, the posterior

part black, with a slight bluish reflection. Hind body slender, red, the two terminal segments and the anal styles black. Legs red, the hind tibiæ infuscate.

Only one example has been obtained; it is apparently a female.

7. **Pæderomimus nobilis.** (Tab. XI. fig. 20.)

Sanguineo-rufus, haud depressus; capite, abdominis fascia ante apicem antennisque nigris, his articulis duobus ultimis testaceis; elytris viridibus; abdominis apice flavo, stylis terminalibus nigricantibus; palpis mandibulisque piceis, elongatis; thorace seriebus dorsalibus 5-punctatis.
Long. $11\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ elongate, the intermediate joints long, but from the fifth to the tenth each joint shorter than its predecessor, so that the tenth is but little longer than broad. Head rather broad, very shining, of a black colour, with a faint metallic reflection, its few punctures coarse. Scutellum closely punctate. Elytra of a beautiful green colour, with the extreme base red, sparingly punctate. Hind body with only a few punctures, except on the fifth and sixth segments; segments two to four each with a very deep transverse impression near the base. Legs red, the femora externally and the tibiæ infuscate.

Only one example, of uncertain sex, has been found. Its coloration and the elongation of the labial palpi render it very distinct; the intermediate joint of the latter is more than twice as long as the basal joint.

8. **Pæderomimus nigrinus.**

Elongatus, gracilis, minus depressus, nigerrimus, nitidus; abdominis antennarumque apicibus flavis; abdomine parcissime punctato; thorace seriebus dorsalibus minus fortiter 5-punctatis.
Long. $9\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Belt*).

Antennæ slender and elongate, the two apical joints clear yellow, the tenth joint a good deal longer than broad. Head rounded and narrowed from the eyes to the neck, the surface with only a few not coarse punctures. Thorax rather elongate and narrow, scarcely narrowed behind, the sides and front angles very deflexed, the dorsal series with four or five punctures on each side placed in a curved series along the side. Scutellum very shining and impunctate. Elytra elongate, with only a few subseriately arranged punctures. Hind body slender, very sparsely punctate; the armature, the whole of the terminal segment, and about one third of that preceding it, yellow. Legs slender; hind tibiæ with a few long slender spinules.

Only one mutilated example has been obtained; I suspect that it is a male, though the last ventral plate has no emargination; there are a few rather long spines extending the whole length of the front femora; owing to the mutilated and rigid condition of the specimen I have not been able to see the prosternum satisfactorily, and the palpi are in greater part destroyed, so that the genus is not quite certain; the species is not like any other known to me in appearance.

9. **Pæderomimus angularius.**

Philonthus angularius, Er. Gen. et Spec. p. 477 [1].

Hab. Mexico [1] (*coll. Sharp*), Cerro de Plumas, Tehuacan (*Höge*), Cordova (*Sallé*).

10. **Pæderomimus pectoralis.** (Tab. XI. fig. 16.)

Rufus; capite thoraceque nigro-æneis, nitidissimis; elytris ad apicem, abdominis postico, pectore ex parte majore, coxis quatuor anterioribus antennisque in medio nigris; pedibus testaceis; elytris parce fortiter punctatis.

Long. 8–10 millim.

Hab. Guatemala, near the city, Capetillo, El Tumbador 2500 feet, Cerro Zunil 4000 to 5000 feet (*Champion*).

This species is extremely similar to *P. angularius*, from which it differs by the more sparingly punctured elytra, by the entirely yellow legs, and by the greater extension of the black colour of the breast, which in *P. angularius* leaves the metasternum red. The sexual characters of the two species are similar; the males have no emargination of the last ventral plate, but its hind margin is less rounded than in the female, and the front femora bear six or eight spines on the middle beneath, while in the female but three or four exist.

P. pectoralis is apparently, like *P. angularius*, a rare insect; the figure is taken from a male example found at Cerro Zunil.

11. **Pæderomimus punctipennis.**

Testaceus; capite thoraceque nitidissimis, illo æneo, hoc rufo cumque elytris æneo-micantibus, his nigricantibus, ad basin testaceis; abdominis fascia ante apicem nigra; antennis in medio fuscis; prothorace seriebus dorsalibus fortiter 5-punctatis; elytris fortiter profundeque punctatis.

Long. 7 millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Antennæ rather short, the three or four penultimate joints transverse. Palpi and mandibles yellow. Head of a very shining brassy colour, very deeply impressed on the middle in front, and with very coarse punctures on each side behind. Thorax a good deal narrowed behind; in addition to the large punctures of the discoidal series, with about six other punctures on each side, four of which are very large. Elytra with a brassy tinge, blackish behind, yellow at the base. Hind body yellow, with the two penultimate segments in greater part black; terminal styles blackish.

Very similar to *Belonuchus mimeticus*, but readily distinguished by the brassy lustre of the thorax and elytra, as well as by the coarser punctures on these parts. Only two very immature females have been found; and as the prosternum is only indefinitely divided, it is quite possible that a knowledge of the male may prove the insect to be congeneric with *B. mimeticus*.

12. **Pæderomimus vicinus.**

Rufus; capite thoraceque nitidissimis, illo æneo, hoc æneo-micante, elytris ad angulos exteriores late fuscescentibus; antennis in medio fuscis; abdominis fascia ante apicem nigra; prothorace seriebus dorsalibus fortiter 5-punctatis; elytris fortiter punctatis.
Long. 8 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Very closely allied to *P. punctipennis*, but rather larger, and with the antennæ a little longer, and the elytra without brassy tint; in most other respects similar, so that it may possibly prove to be only a local variation of *P. punctipennis*.

Only one female, in bad condition, has been found.

13. **Pæderomimus simplex.**

Fulvus; capite thoraceque æneis, nitidissimis; elytris abdominisque apice nigris, illis basi rufa, hoc testaceo-cingulato; antennis pedibusque testaceis, illis in medio obscuratis; prothorace seriebus dorsalibus 5-punctatis; elytris fortiter punctatis.
Long. 7 millim.

Hab. GUATEMALA, near the city, San Gerónimo and San Joaquin in Vera Paz (*Champion*).

Although very similar to *P. pectoralis*, this is a much smaller and feebler insect, and has the breast but little infuscate, while the black colour on the wing-cases extends much nearer to the base.

In the male there is a scarcely perceptible emargination of the last ventral plate; but when the legs are extended this sex is readily distinguished, as the hind tibiæ are a good deal dilated, being, except at the base, nearly twice as thick as they are in the female.

A small series was found at San Gerónimo, and single examples at each of the other localities.

14. **Pæderomimus mexicanus.**

Fulvus; capite thoraceque fuscis, subænescentibus; elytris ad angulos posteriores abdominisque apice nigris; antennis testaceis in medio fuscis; pedibus pallide testaceis; elytris fortiter punctatis.
Long. 6 millim.

Hab. MEXICO, Jalapa (*Höge*).

Although very closely allied to *P. simplex*, this insect presents too many points of difference to allow of its being considered a mere variety thereof. It is smaller, with less brassy head and thorax; the elytra are shorter, with fewer punctures, and with the black colour occupying only one half their surface, and the black colour of the hind body is less definite and extensive in front.

Only one example has been found; it is a male, having the hind tibiæ dilated as in *P. simplex*.

15. **Pæderomimus maculipes.**

Capite, elytris, abdominis postico pectoreque nigris; thorace abdominisque basi rufis; antennis crassiusculis, flavis; pedibus albidis, femorum dimidio externo dilute nigro.
Long. $6\frac{1}{2}$ millim.

Hab. Mexico (*Flohr*), Cordova (*Sallé*), Jalapa (*Höge*).

Antennæ rather stout, entirely yellow, rather thicker externally, the penultimate joints not quite so long as broad. Head black, only moderately broad, with numerous coarse punctures behind. Thorax rather slender, a good deal narrowed behind, the six punctures of the discoidal series and the six or seven others existing on each side large and deep. Scutellum densely and coarsely punctate. Elytra not elongate, scarcely so long as the thorax, black, with the base red, with deep coarse punctures, which are wanting towards the hind margin. The three basal segments of the hind body red, and each with crenate sculpture on the transverse depression at its extreme base; the following or fourth segment in greater part black, but red at the extreme base; the penultimate segment black, with the hind margin yellow; the terminal segment black, with the base yellow; the segment of the armature dark. Legs very pale, with the outer portions of the femora broadly and definitely dark, and the apices of the tibiæ slightly infuscate.

Apparently rare, only three examples having come under my observation. That which has served as the type for the above description is no doubt a male, though the only character indicating this that I can observe is an extremely slight emargination of the last ventral plate. The female much resembles the same sex of *P. difformiceps*, but has the head and thorax of a rather different form, and the basal joint of the hind foot shorter.

16. **Pæderomimus difformiceps.** (Tab. XI. fig. 23.)

Angustior, rufus, nitidus; capite, elytris (basi excepta) abdominisque postico nigris, hoc flavo-cingulato; antennis, palpis pedibusque testaceis; femoribus extrorsum pectorisque lateribus fuscis; prothorace seriebus dorsalibus sat fortiter 6-punctatis; elytris fortiter minus dense punctatis.
Long. $7\frac{1}{2}$ millim.
Mas, Capite superne postico truncato.

Hab. Guatemala, near the city, Capetillo (*Champion*).

Antennæ rather stout, the penultimate joint about as long as broad. Head narrow, with very few punctures. Thorax slender, the six punctures of the dorsal series and the four or five other punctures present on each side rather coarse. Elytra black, with the base narrowly red, coarsely punctate, shining, the punctures more scanty and less coarse behind, so that the hind margin is smooth. Hind body red, with the dorsal plate of the antepenultimate segment more or less black behind; the penultimate segment black, with the hind margin yellow; the terminal segment yellow at the base, black behind; the armature black. Legs pallid yellow, with the femora externally broadly dilute black; the tibiæ slightly obscure at the apex.

The male has the head very peculiarly formed, the vertex above being truncate, and connected with each angle of the truncature there is a broad obscure channel, which is finely punctate; at the back there is a deep excavation on each side, and in front of this on each side a patch of very short minute pallid pubescence; there is a very slight emargination of the last ventral plate.

A good series was found near Guatemala city, three examples at Capetillo; the figure represents a male.

17. **Pæderomimus cephalax.**

Rufus; capite superne æneo-fusco; elytris (basi excepta) abdomineque ante apicem nigris; antennis pedibusque testaceis, illis in medio obscuratis; prothorace seriebus dorsalibus fortiter 6-punctatis; elytris basi dense, apice parce, punctatis.
Long. 8 millim.

Hab. Panama, David (*Champion*).

Head rather broad (especially in the male), bearing only a few coarse punctures. Antennæ rather long, a little thickened externally, the middle joints slightly darker than the others, the tenth joint about as long as broad. Thorax long and slender. Elytra black, not broadly red at the base. Hind body with the two penultimate segments more or less deep black, the hind margin of the penultimate yellow; the terminal segment and the apical styles yellow, each more or less infuscate behind.

The male has the head larger than the female and tumid beneath, the submentum very large, and the convergent lines of the genæ more separated than usual, so that they do not meet till the hind margin is attained. In the female the structure of the head is normal. The male has also an extremely slight emargination of the last ventral plate.

Leaving aside the remarkable structure of the head in the male, this species has a considerable resemblance to *P. ornatellus*, but is much less slender, and has rather shorter and thicker antennæ, and the head is paler. The intensity of the black colour on the posterior part of the hind body is apparently variable.

18. **Pæderomimus nigripennis.** (Tab. XI. fig. 22.)

Rufus; elytris, metasterno antennisque in medio nigris; femoribus apice, tibiis abdomineque ante apicem plus minusve nigricantibus; antennis articulis tribus ultimis flavis; elytris parce punctatis.
Long. 7 millim.

Hab. Panama, Bugaba 800 to 1500 feet, Volcan de Chiriqui from 2000 to 4000 feet (*Champion*).

Antennæ rather long and slender; the three basal joints red, the next five black, the terminal three clear yellow; the penultimate joints rather longer than broad. Head rather narrow, quite rounded behind, bearing distant moderately coarse punctures. Thorax much narrowed behind, the five punctures of the dorsal series and the five

others existing on each side not coarse. Scutellum and the extreme base of the elytra red, the former punctate on the middle. Elytra with only distant, moderately coarse punctures; about as long as the thorax. Tarsi slender; the basal joint but little thicker than the following, slightly longer than the apical joint. Hind body red, the two penultimate segments more or less tinctured with black, and with numerous coarse, black, depressed setæ; the other part of the hind body bears rather numerous, very elongate erect setæ, which, however, are readily removed, so as to be more or less wanting in most of the examples.

A few examples were found on the Volcan de Chiriqui and a very large series at Bugaba; but I have not detected any sexual distinctions. The only feature showing much variation is the depth of the black colour on the hind body and on the tibiæ.

19. **Pæderomimus insolitus.** (Tab. XI. fig. 21.)

Rufo-testaceus; capite nigro, subæneo; elytris ex parte abdomineque ante apicem nigris; antennis in medio fuscis, apicem versus fusco-rufis; pedibus abdominisque apice testaceis; elytris crebrius punctatis; thorace seriebus dorsalibus fortiter 6- vel 7-punctatis.

Long. $8\frac{1}{2}$–$9\frac{1}{2}$ millim.

Mas, Capite majore, palpis labialibus difformiter dilatatis.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Antennæ slender, every joint longer than broad. Thorax elongate, the dorsal and lateral punctures coarse. Scutellum red, densely punctate. Elytra black, broadly red at the base, rather coarsely and not sparingly punctate. Hind body with the fifth segment, except at the extreme base, black; the sixth segment black, with the hind margin broadly yellow; the apical segment yellow; the terminal styles infuscate.

The male has the head broader than the female, and furnished in proximity to the median channel with a very minute punctuation; its labial palpi are very peculiar, the basal joint is incrassate, and the second joint is greatly dilated, so as to form an irregular quadrate plate furnished with a coarse abruptly curved seta, while the terminal joint is triangular, the triangle being articulated to the preceding joint by a slender base, forming a very short peduncle, placed at one side of the triangle; the front tibiæ in this sex are a good deal thicker than they are in the female, and there is a broad shallow notch on the last ventral plate.

Six examples have been found; the one represented is a male.

Though closely allied to *P. angusticollis*, the species differs in several details.

20. **Pæderomimus angusticollis.**

Philonthus angusticollis, Er. Gen. et Spec. p. 487[1].

Hab. Mexico[1] (*coll. Sharp*), Cordova (*Sallé*), Mirador (*Höge*); Guatemala, San Gerónimo, Volcan de Atitlan 2500 to 3500 feet (*Champion*).

This species is apparently rare; the only two examples of the male I have seen are

in a very fragmentary and decayed condition, but appear to possess the same extraordinary sexual characters that I have described in *P. insolitus*. It is very remarkable that these should have escaped Erichson's notice, as he leaves us to infer, by stating that the tarsi are simple in both sexes, that he had really distinguished the sexes. The species is, I think, however, really the one Erichson intended, and was so determined in the Sallé collection, the original type being in Chevrolat's collection.

The four examples found in Guatemala are all females, but appear truly conspecific with those from Mexico.

21. Pæderomimus cribricollis.

Philonthus cribricollis, Er. Gen. et Spec. p. 487[1].

Hab. Mexico (*coll. Chevrolat*)[1].—South America, Colombia[1].

I can give no information about this species, which would appear to be extremely closely allied to *P. angusticollis*; but I have considerable doubt whether it ought to be included in our list, as it is extremely questionable to me whether any species of *Pæderomimus*, especially a rare one, occurs both in Colombia and Mexico.*

22. Pæderomimus contractus.

Rufus; capite superne nigro-æneseente; antennis pedibusque testaceis, illis medio subobscuratis, his femoribus extrorsum late fuscis; elytris (basi excepta), abdominis postico pectoreque nigricantibus; abdomine ante apicem flavo-cingulato; prothorace seriebus dorsalibus grosse 6-punctatis; elytris profunde fortius denseque punctatis.
Long. 7 millim.

Hab. Guatemala, San Gerónimo, Cubilguitz, Cahabon, Chacoj (*Champion*); Nicaragua (*coll. Sallé*).

Antennæ rather stout, yellow, with the four or five middle joints brownish, the penultimate joint not quite so long as broad. Head rather narrow, extremely shining, brassy black, its punctures very large. Thoracic punctures excessively large, the dorsal series closely approximate in front, so as to give rise frequently to the appearance of the space separating them being carinate, each puncture separated from the next only by a very small space. Elytra very densely and coarsely punctate, but the hind margin shining; a rather broad band at the base red. The apex of the hind body black, the black colour being divided just before the extremity by a broad yellow space. Legs pale yellow, each of the femora broadly dilute black outwardly.

Mr. Champion met with a large series of examples of this species, exhibiting but little variation; only one or two examples were met with in each of the other localities. The example from Nicaragua has the antennæ darker in the middle than in the others. The male can scarcely be distinguished from the female by external characters.

* The species figured under the name of *P. cribricollis* (Tab. XI. fig. 24) should be referred to *P. cribratus*.

23. **Pæderomimus confertus.**

Rufus; capite superne plus minusve nigro-subænescente; pedibus albidis, femoribus extrorsum antennisque in medio fuscis, elytris apicem versus nigricantibus, abdomine ante apicem plus minusve dilute nigro-tincto; prothorace seriebus dorsalibus grosse 6-punctatis; elytris profunde, fortius denseque punctatis.
Long. 6–6½ millim.

Hab. Panama, David, Volcan de Chiriqui about 4000 feet (*Champion*).

Antennæ rather stout, a little thickened externally, very pale yellow, the middle five joints deeply infuscate, the tenth joint just about as long as broad. Head rather narrow, its punctures coarse. Thorax slender; its punctures very coarse, the two dorsal series considerably more approximate in front than behind, but not sufficiently so to give any appearance of carination of the space between them. Elytra short, their hinder half vaguely black; their punctuation very coarse, close, and deep. Hind body with the three basal segments much depressed at the base, and in this part with very evident crenate punctuation.

This species varies in the amount to which the upperside of the head and the posterior part of the hind body are tinctured with black. There is hardly any difference between the sexes, the male having only a scarcely perceptible emargination of the last ventral plate.

Eight examples were found at David, and two others on the Volcan de Chiriqui.

24. **Pæderomimus ornatellus.**

Angustior, rufus; capite nigro æneo-micante; elytris abdomineque ante apicem nigris, illis basi rufa, hoc apice flavo; pedibus antennisque testaceis, illis medio atque pectoris lateribus plus minusve infuscatis; thorace seriebus dorsalibus fortiter 6-punctatis; elytris crebre punctatis.
Long. 7½ millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

This is a narrow insect, with elongate slender antennæ, each joint of which, from the fourth to the tenth, is evidently shorter than its predecessor, the tenth being, however, considerably longer than broad. The head is narrow, and extremely shining, and bears rather numerous coarse punctures, which are absent from the middle. The thorax is elongate and slender, and the elytra are rather more closely and less coarsely punctate than in many of the allied species. The hind body has the penultimate segment black, but yellow behind; the segment preceding it is broadly black behind; the terminal segment is yellow, its hind margin and the terminal styles slightly infuscate.

Eight examples have been found; the male differs from the female only by a moderately deep notch on the last ventral plate. The species presents no salient points of distinction from the Amazonian *P. aberrans*, but has many minor points of difference in colour, sculpture, and form.

25. **Pæderomimus basipennis.**

Angustior, rufus; capite nigro, elytris abdomineque postico nigris, illis basi rufa, hoc ante apicem flavo-cingulato; antennis pedibusque rufis, his tibiisque apicem versus, illis medio, fuscescentibus; thorace seriebus dorsalibus fortiter 6-punctatis; elytris crebre fortiter punctatis.

Long. $7\frac{1}{2}$ millim.

Hab. Panama, Chiriqui (*Ribbe*).

This is a species apparently closely allied to *P. ornatellus*, but with numerous points of minor distinction; the antennæ are less elongate, the penultimate joint being scarcely longer than broad; the thorax is rather more slender, and a little more rounded at the anterior angles; the hind part of the insect is black, with a yellow fascia on the base of the terminal and hind margins of the penultimate segments dividing the black colour; and the antennæ and legs are infuscate in part. The unique example, which is in a decayed, and to a certain extent discoloured, condition, is apparently a female.

26. **Pæderomimus distans.**

Rufus; capite nigro-æneo, elytris [basi excepta] abdomineque ante apicem nigris; antennis minus gracilibus, basi rufa; prothorace seriebus dorsalibus 7- vel 8-punctatis, inter series has punctis adjectis quatuor; pedibus testaceis, nigro-spinulosis.

Long. 8 millim.

Hab. Guatemala, Zapote (*Champion*).

Antennæ rather long and stout, the penultimate joint rather longer than broad. Head very shining, brassy black, rather narrow; with numerous coarse punctures, leaving a broad space on the middle quite smooth. Thorax pale red, with a very slight brassy reflection; with a crowded dorsal series of seven (on one side) or eight (on the other) large punctures, on the space between these, just behind the middle, with four other punctures quadrately placed, and also with about seven other large punctures on each side. Elytra black, rather broadly red at the base, shining, coarsely punctate, the punctures at the base finer and denser. Hind body with the two penultimate segments black, the hind margin of the hinder of them, as well as the terminal segment, yellow; middle lobe of the armature yellow; apical styles, except at the extreme base, black. Legs yellow, the tibiæ slightly infuscate.

This species is a very abnormal one in the genus, the mandibles and palpi being less slender and elongate than usual, and the prosternum only very indistinctly divided, so that the genus is doubtful; the basal joint of the hind foot is a good deal longer than the apical joint. Only one example has been met with, and its sex is uncertain; possibly it may be a female, and in that case the male might show the species to be an aberrant mimetic *Belonuchus*.

27. **Pæderomimus cribratus.** (*Pæderomimus cribricollis*, Tab. XI. fig. 24.)

Rufus; capite, metasterno abdomineque ante apicem nigris; capite superne ænescente; elytris (basi excepta)

nigricantibus; antennis testaceis, medio subobscuratis; pedibus pallide testaceis, femoribus extrorsum fuscescentibus; capite thoraceque dense grosse punctatis.
Long. 7 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Head shining brassy above, covered with very coarse punctures. Thorax covered with very coarse punctures, which leave at the base and at the front margin small spaces along the middle between them smooth. Elytra densely and rather coarsely punctate, the punctuation at the hind margin more scanty and finer; black, with an obscure brassy tinge, the base rather broadly red. Hind body with the two penultimate segments in greater part black, the apical segment yellow, its hind margin and the terminal styles infuscate. Underside of the head shining, with numerous coarse punctures.

Five examples of this remarkably sculptured species were met with. The male scarcely differs from the female externally.

28. **Pæderomimus perforatus.**

Rufus; capite, metasterno abdomineque ante apicem nigris; capite superne ænescente; elytris (basi excepta) nigricantibus; thorace rufo-æneo; antennis in medio nigricantibus; pedibus testaceis, tibiis apicem versus fuscescentibus; capite thoraceque dense grosse punctatis.
Long. 8 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Head very shining, brassy above, covered with very coarse punctures, leaving a considerable space along the middle in front smooth. Thorax red, but deeply tinctured with brassy; with very numerous coarse punctures, which do not extend to the base, the punctures of the two sides of the thorax remain distinct, and not meeting on the middle except just on the disc. Elytra brassy black, rather broadly red at the base, somewhat closely and moderately coarsely punctate. Head beneath shining, with only a few fine punctures.

A single, decayed example is the only one that has been captured: though allied to *P. cribratus* this species has numerous good points of distinction, the most striking of them being the finely and sparingly punctate underside of the head.

29. **Pæderomimus corrosus.** (Tab. XI. fig. 25.)

Fulvus; capite thoraceque rufo-fulvis, illo interdum superne ænescente; elytris (basi excepta) fusco-subæneis; antennis testaceis, medio ænescentibus; pedibus albido-testaceis, femoribus extrorsum abdomineque ante apicem fuscescentibus; capite thoraceque omnium densius grosseque punctatis.
Long. $6\frac{1}{2}$ millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Antennæ rather slender and elongate. Head, except on its front margin between the antennæ, entirely covered above with very large closely placed punctures. Thorax with its very coarse punctuation even denser than that upon the head, so that many of

the punctures are confluent, and with no smooth space along the middle. Elytra deeply and very densely punctate.

This species is most remarkable on account of its sculpture, and is very Stilicoid in form. The male differs from the female in having the mandibles much broader, and the whole of the underside of the head, including the mentum, and the bases of the maxillæ and labium covered with a dense fine punctuation, rendering these parts opaque, and with a minute pubescence; while in the female the parts named are in the normal condition, the head being shining beneath and bearing coarse punctures; there is no emargination of the last ventral plate.

Mr. Champion found a series of a dozen examples, under decaying leaves and vegetable rubbish, on the banks of running streams in the forest of the low country. The figure is taken from a male.

LINODERUS.

Corpus gracile, haud depressum; antennis pedibusque elongatis, gracilibus. Tarsi posteriores articulo basali elongato, quam articulus apicalis longiore. Palpi labiales, articulo intermedio sat elongato quam articulus ultimus paulo longiore. Antennæ multo post marginem frontis anteriorem insertæ. Coxæ intermediæ distantes.

I have separated this insect on account of the insertion of the antennæ at some distance behind the front margin of the head; they are not inserted in large cavities, as in *Chroaptomus*; and the slender labial palpi, as well as numerous other characters, distinguish it from the genus just named, to which, indeed, it is not allied by any other character than the position of insertion of the antennæ. The side-piece of the prothorax is extremely small and moderately inflexed; the prosternum is divided by a well-marked transverse ridge; the portion behind this ridge is polished and not strigose. The extremely slender legs have the femora destitute of spines, and the tibiæ clothed with long hairs, but with no true spines. The front tarsi are quite undilated in each sex, and the claws are small.

1. **Linoderus gracilipes.** (Tab. XII. fig. 2.)

Gracilis, haud depressus, sanguineo-rufus, nitidus; capite elytrisque cyaneo-viridibus; antennis basi apiceque testaceis, medio nigricante; tibiis plus minusve nigricantibus; abdominis postico nigro, parce punctato; thorace seriebus discoidalibus subtiliter 4- vel 5-punctatis.

Long. 8 millim.

Hab. Panama, Volcan de Chiriqui, Bugaba? (*Champion*).

Antennæ slender and elongate, with the three basal and the two apical joints yellow, the three basal joints remarkably elongate. Head narrowed behind the eyes. Thorax slender, the discoidal and other punctures fine; the number of punctures in each series may be four, five, or six, five being usual; the anterior one is remote from the others. Scutellum red, with a few coarse punctures. Hind body slender, quite sparingly punctate, the two terminal segments and the armature black. Under surface of the head with a

single large puncture on the middle of each side. In the male the head is densely and finely punctate and clothed with an upright pubescence; the antennæ are longer than they are in the female; and the last ventral plate is longer in the middle behind, and marked at the apex by a broad shallow angular notch, each side of which forms an angle, as the notch extends the whole width of the prolonged portion of the plate; the anal styles are twice or three times as broad as they are in the female.

A fine series of this graceful insect was procured; the male is figured. As all the few specimens labelled Bugaba were amongst Mr. Champion's duplicates, I think it probable there has been a mistake in labelling, and that the insect has only been found on the Volcan de Chiriqui.

Mr. Champion states that it is found in moss and fungi on trees.

PESCOLINUS.

Corpus gracile, minus depressum, læte coloratum. Palpi graciles, elongati, labialium articulo intermedio quam articulus basalis fere duplo longiore. Prosternum anterius transversim divisum. Coxæ intermediæ parum distantes. Tarsi anteriores marum sat dilatati, subtus longissime hirtelli.

This genus is established for an elegant insect of Pæderoid colours, differing from its immediate allies amongst the *Philonthus* group of genera by the slight separation of the intermediate coxæ and by the peculiar structure of the front tarsi of the males. The prothoracic lateral seta is removed from the examples at my disposition; but there can be no doubt that, owing to the great deflection of the thoracic marginal line, the seta must be placed at a considerable distance therefrom. The division of the prosternum into two parts is very definite, and the posterior portion is obsoletely and not finely transversely striate. The hind tarsi are very elongate, the basal joint being quite as long as the apical.

1. **Pescolinus palmatus.** (Tab. XII. fig. 3.)

Gracilis, nitidissimus, omnium parcissime punctatus, sanguineo-rufus; capite abdominisque apice nigris, illo superne viridi-micante; pedibus nigris; tarsis, coxis omnibus femorumque summis basibus rufis; antennis in medio fuscis; elytris viridibus, basi rufa; prothorace seriebus dorsalibus 4-punctatis.

Long. $9\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ slender, the penultimate joint longer than broad. Head a little narrowed behind the eyes, the upper surface with a few not coarse punctures. Thorax elongate and slender, very shining, red, the dorsal series consisting of about four, rather fine, widely separated punctures, in addition to which there are five or six punctures on each side. Elytra elongate, finely and extremely sparingly punctured, of a blackish green colour, with the base [and scutellum] red, very shining. Hind body slender, very little punctured, the three terminal segments and the armature black.

The male has the front tarsi dilated, and furnished beneath with very long divergent

hairs; the last ventral plate is prolonged in the middle, so as to form an abrupt lobe, the hind margin of which is feebly emarginate; the anal styles are dilated, except at the base, and the peculiar structure of the last ventral plate evidently influences their movements.

Only three examples of this elegant insect have been found. The female is unknown.

ODONTOLINUS.

Palpi labiales articulo secundo quam ultimus breviore. Prosternum anterius transversim carinato-divisum. Coxæ intermediæ late distantes. Tarsorum unguiculi basi appendiculata.

This genus is characterized by the possession of a structure absent from all the allies, viz. the claws of the tarsi being furnished with a tooth beneath. The tarsi are slender, but somewhat deplanate, and are very pubescent beneath, the basal joint of the hinder pair being much longer than the apical joint. The lateral line of the thorax is placed quite on its under surface, the lateral seta being thus remote from the marginal line; the true side-piece is very small. The male of the unique species has the hind femora spinose at the base, the front ones with several short spines in the middle. Thus the characters of the genus, independent of the unguicular structure, are a mixture of those found in *Belonuchus* and *Pæderomimus*.

1. **Odontolinus fasciatus.** (Tab. XII. fig. 4.)

Subdepressus, nitidus, rufo-testaceus; elytris (basi excepta) abdomineque ante apicem nigris; prothorace seriebus dorsalibus 2-punctatis; elytris parce minus fortiter punctatis.
Long. 9 millim.

Hab. Panama, Bugaba 800 to 1500 feet, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Although this insect has almost the coloration of *Pæderomimus salvini* and *P. nigripennis*, it is distinguishable at a glance by the great diminution of the number of punctures on the thorax, there being only two in each of the dorsal series (one just behind the middle, the other some little distance behind the front margin), and two or three lateral punctures, all of them being fine. The scutellum is closely and finely punctate, but there are very few punctures on the elytra, and only two or three on each side of the head; the latter is canaliculate along the middle in front. The two black fasciæ on this insect are remarkably definite.

The male has the front femora spinose in the middle beneath, and a small patch of black spines at the base of each of the hind femora, but there is no emargination of the last ventral plate; an example of this sex is figured.

Ten examples were taken at Bugaba, and one on the Volcan de Chiriqui.

MUSICODERUS.

Palpi elongati, labiales articulo intermedio perelongato quam articulus basalis triplo longiore. Prothorax parum elongatus, lateribus valde deflexis. Prosternum anterius transversim divisum, parte anteriore brevi, parte posteriore evidenter strigosa. Coxæ intermediæ distantes. Tarsi posteriores graciles, articulo basali quam ultimus paulo breviore. Femora maris breviter spinosa.

This genus will be distinguished from *Belonuchus* by the great elongation of the middle joint of the labial palpi, and by the much deflexed sides of the prothorax, as well as by the strigose posterior part of the prosternum. *Musicoderus* is equally close to *Pæderomimus*, but has a different form of prothorax, this being abbreviate rather than elongate, and by the great elongation of the middle joint of the labial palpi; in this last character certain aberrant species I have at present placed in *Pæderomimus* (e. g. *P. nobilis*) approximate to it. Although the division of the prosternum into two parts is not indicated by any definite carina, yet the condition of the surface of the two parts is so different as to render the two very distinct, the strigosity of the hinder part being probably better developed than in any of the *Pæderomimi*; the bases of the front coxæ near the strigose portion of the prosternum are also strigose, and I have no doubt this indicates a stridulatory function of these parts, for when the loosely articulated coxa is turned forwards the two strigose parts come into apposition.

The genus is no doubt peculiar to Tropical America, and will comprise, in addition to the species here described, one or two nondescript Peruvian species.

1. **Musicoderus cephalotes.** (Tab. XII. fig. 5.)

Niger; abdomine apice flavo; antennis articulo ultimo ferrugineo; capite subcirculari; prothorace parum elongato, seriebus dorsalibus 5-punctatis, nitidissimo ad angulos anteriores, et ad latera deflexa dense subtilissime punctulato; elytris parce punctatis, singulo prope scutelli apicem impresso.
Long. 10–11 millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Antennæ very slender, the basal joint very elongate, the penultimate joint much longer than broad. Head large, with numerous coarse punctures, which are absent along the middle in front, and with numerous, finer, subobsolete punctures at the rounded hind angles. Thorax rather small, narrowed behind, the anterior angles rounded, convex, the deflexed sides finely punctulate, and on each side of the middle with a dorsal series of five punctures, the anterior and posterior of these punctures being more separated than the others; between the dorsal series and the fine lateral punctuation there are five or six other punctures. Elytra very intense black, shining, rather finely and sparingly punctate, with a depression on each side of the apex of the scutellum; this latter very densely and finely punctate. Hind body moderately closely punctate; the terminal segment, the hind margin of that preceding it, and also the armature, yellow.

The male has two series of short, distant spines along the hind margin of the

posterior femora, and the front femora are armed with longer spines; there is no emargination of the last ventral segment. The female has no true spines on the hind femora, and those on the front femora are fewer and shorter than they are in the male.

Mr. Champion captured about a dozen examples; the male is figured.

2. **Musicoderus gracilis.**

Niger; abdomine apice flavo, antennis articulis duobus ultimis albido-testaceis; capite subcirculari; prothorace parum elongato, seriebus dorsalibus 5-punctatis, nitidissimo ad angulos anteriores et ad latera deflexa dense subtilissime punctulato; elytris parcius punctatis, singulo prope scutelli apicem impresso.

Long. 11 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Although only a solitary female example has been received, I have no doubt that it indicates a distinct species, though it is exceedingly similar to *M. cephalotes*; it is a little more slender, and has the elytra more sparingly punctate, and the two terminal joints of the antennæ remarkably definitely pale in contrast with the other joints, which are quite black. The spines on the front femora of this female are only three in number, and being quite short readily elude observation.

PÆDERALLUS.

Corpus subdepressum, fragile; antennis, pedibus palpisque elongatis, gracilibus. Prothorax lateribus deflexis, margine laterali occulto. Tarsi posteriores subtus longius setoselli, unguiculis magnis.

The curious insect for which I propose this generic name is allied to such aberrant *Philonthi* (e. g. *P. serpentinus*) as have the prothorax slender and the marginal seta remote from the lateral margin; but in the insects I have just mentioned, the sides of the thorax are less deflexed, and the peculiar structure of the legs and claws is not developed: moreover, as the *Philonthi* in question will have to be removed from the genus when it can be submitted to a revision, this need not militate against the separation of the very peculiar *Pæderallus*. There is probably an elongate lateral seta placed far from the prothoracic margin, but in the examples at my disposition this is removed. The sides of the thorax are so much deflexed that when viewed from above no part of the lateral margin can be seen. The prothoracic side-piece, though very small, is not displayed as in *Pæderomimus*, but is inflexed as it is in *Philonthus*. The mesosternum is much produced between the coxæ, and terminates in a very acute point, the middle coxæ being contiguous. The hind legs are remarkably elongate, the femora being thickest at the base, the tibiæ without spinules, the basal joint of the tarsi a good deal shorter than the apical joint; the rather elongate claws are evidently of unequal thickness. Although the palpi are slender and rather elongate, I anticipate the genus will prove to be allied to *Actobius* rather than to *Philonthus*.

1. **Pæderallus fragilis.** (Tab. XII. fig. 1.)

Gracilis, subdepressus, nigricans; capite thoraceque dense subtiliter punctatis, hoc linea mediali, angusta lævigata; elytris subtiliter minus dense, abdomine crebrius, punctatis; pedibus fuscis.
Long. 9–10 millim.

Hab. Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

Antennæ reaching nearly to the extremity of the elytra; the joints very elongate, each of the fourth to the tenth slightly more slender in the middle than at the base and apex. Head rather narrow, greatly rounded at the hind angles; the eyes not occupying half the sides; the surface closely punctate, without a smooth space. Thorax slender, much narrower than the elytra, narrowed behind, punctate like the head, but with a narrow smooth line along the middle. Scutellum densely but indistinctly punctate. Elytra black, rather shining, rather closely and finely but very distinctly punctate. Hind body acuminate at the apex, densely punctate, the punctuation rather coarse, especially at the bases of the segments.

Three examples only have been found; they all have the front tarsi simple, and offer no indication of their sex; they are unfortunately in a condition of imperfect preservation.

ACTOBIUS.

Erichsonius, Fauvel, Faune Gal.-rhen. iii. p. 427 (nom. præoc.).
Actobius, Fauvel, idem Supp. p. 72.
Bisnius, Thoms. (nec Leach) Skand. Col. ii. p. 168; Rey, Col. Fr. Staphyliniens, p. 439.

This genus comprises about forty species, and has a wide distribution in each hemisphere, but is probably more numerous in species in the New World than in the Old, Dr. Horn having just discriminated twenty-three species in the North-American fauna. These insects are of riparial habits, frequenting the margins of streams and moist places; they are all of small size, and the species are frequently extremely similar and difficult to distinguish. Hence it will probably prove the case that some species that have been supposed to be found in widely separated localities have been incorrectly identified.

1. **Actobius fortis.**

Major, nigerrimus, nitidus, femoribus basi fuscescentibus; capite thoraceque crebrius fortiter punctatis, nitidulis; elytris crebrius minus subtiliter punctatis, nitidulis, vix perspicue subchalybeis.
Long. 7½ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet, Bugaba 800 to 1500 feet (*Champion*).

Antennæ slender, black, the penultimate joint slightly longer than broad. Head very distinctly punctate, with only an extremely small space on the middle smooth. Thorax quite straight at the sides, punctured like the head, with a narrow sharply defined space along the middle smooth.

The male front tarsi are moderately dilated, and there is a small narrow notch on the last ventral plate.

This species is readily distinguished by its stature and broad form; the middle coxæ are more widely separated than in other species. Only two examples have been found.

2. **Actobius facilis.**

Major, niger, nitidulus; pedibus fuscis, femoribus pallide testaceis; capite thoraceque crebrius fortiter, elytris subtilius, punctatis.
Long. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ slender, with the basal joints more than usually elongate, the penultimate joint quite as long as broad. Head rather elongate, a little narrowed behind, closely and rather coarsely punctate. Thorax intense black, extremely shining, its punctuation coarse and close. Elytra shining, sparingly and rather finely punctate.

The male front tarsi are moderately dilated, and there is a small but distinct notch on the last ventral plate, the quite small space in front of the notch being smooth and shining.

This is another rather distinct species, with hind tarsi longer than usual. Only one example has been found.

3. **Actobius concolor.**

Niger, nitidulus; pedibus fuscis, femoribus fusco-testaceis; capite thoraceque crebrius fortiter, elytris crebrius subtiliter, punctatis.
Long. $6\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet, Peña Blanca 3000 to 4000 feet (*Champion*).

Antennæ rather stout, the penultimate joint scarcely so long as broad. Head rather broad, rather closely and deeply punctate. Thorax quite straight at the sides, punctate like the head, the medial smooth space definite and distinct. Elytra shining, their punctuation differing little at the base and apex, not dense.

The male front tarsi are moderately dilated, and there is a small notch on the last ventral plate.

A series of a dozen examples was found on the Volcan de Chiriqui, and a single example at Peña Blanca.

4. **Actobius arduus.**

Angustulus, parallelus, niger; pedibus pallide testaceis; antennis fuscis, basi sordide testaceis; capite thoraceque crebrius fortiter punctatis; elytris quam prothorax longioribus, minus dense subtilius punctatis, margine posteriore vage pallidescente.
Long. 5 millim.

Hab. MEXICO, Guanajuato, Cordova, Puebla (*Sallé*), Mirador, Tehuacan, Jalapa

(*Höge*); GUATEMALA, near the city, San Gerónimo, Torola, Senahu, Balheu, Tactic, Panajachel 5000 feet, Cerro Zunil 4000 feet (*Champion*); PANAMA, San Miguel in the Pearl Islands (*Champion*).

This is a slender species, with rather long and narrow head. The antennæ are rather slender with the tenth joint nearly as long as broad, the terminal joint elongate. The oblong thorax is quite straight at the side, and bears numerous distinct but not coarse punctures, a space along the middle being smooth; the elytra are elongate, a good deal longer than the thorax, their punctuation rather fine and somewhat distant, and have a scanty flavescent pubescence; the hind body has also a flavescent pubescence. The legs are pale yellow, the front tibiæ slightly fuscescent, and the coxæ fuscous. The male has the front tarsi a good deal dilated, and a slight emargination of the last ventral plate; the surface in front of the emargination is, as it were, obliquely shaved off.

A large number of examples have been found, and amongst these a considerable number of variations, but I have not been able to discriminate more than one species; the most remarkable of the varieties is an example from Puebla, in which the elytra are shorter, and the punctuation of the head and thorax more obsolete than in the type. The flavescent hind margin of the elytra is always very narrow, and in immature examples appears merely as a picescent condition of the posterior part of the wing-cases.

5. **Actobius agnatus.**

Philonthus agnatus, Er. Gen. et Spec. Staph. p. 513[1]; Solsky, Hor. Soc. Ross. v. p. 137[2].
Actobius agnatus, Horn, Tr. Am. Ent. Soc. xi. p. 229[3].

Hab. NORTH AMERICA, Louisiana[1].—MEXICO[2].—SOUTH AMERICA, Colombia[1].

I have not seen any example from within the limits of our fauna agreeing with Erichson's description. *A. arduus* is probably nearest to *A. agnatus*, but among the numerous variations of the former species there is none that accords with the description alluded to.

6. **Actobius simplex.**

Angustulus, parallelus, fuscus; capite elytrisque nigricantibus; pedibus sordide testaceis, coxis concoloribus; antennis gracilibus; capite, thorace elytrisque crebrius punctatis.
Long. $5\frac{1}{2}$ millim.

Hab. MEXICO, Mirador (*Höge*).

Antennæ slender, black, with the base only indistinctly paler, the tenth joint quite as long as broad. Head rather long and narrow, with rounded hind angles. Thorax narrow and elongate, with its punctuation coarse and rather close, so that the smooth space along the middle is unusually definite. Elytra elongate, black, finely but not very closely punctate. Hind body fuscous red.

The male front tarsi are moderately dilated, the last ventral plate only very slightly

emarginate, but with a small smooth angular space in front of it; the female is unknown.

The only example found is possibly immature, and its colour when mature might be nearly all black. Though very closely allied to *A. arduus* it is distinguished by numerous slight peculiarities.

7. **Actobius mixtus.**

Sordide rufus; capite elytrisque nigricantibus, horum apice, antennarum basi pedibusque testaceis; pectore abdominisque apice fuscis; thorace crebre fortiter, elytris parcius, punctatis, his nitidulis.
Long. 4 millim.

Hab. MEXICO, Cordova, Vera Cruz, Tehuacan (*Höge*); GUATEMALA, San Gerónimo (*Champion*).

Antennæ fuscous yellow, with the three basal joints clear yellow; moderately long, not stout, the penultimate joint not quite so long as broad. Head rather coarsely punctate, with a rather broad space along the middle impunctate. Thorax slender, slightly narrowed behind, very shining, infuscate red, somewhat sparingly and coarsely punctate, with a rather broad space along the middle smooth. Elytra shining, dilute black, with the hind margin rather broadly pale, and the sutural region frequently obscurely paler, sparingly and rather finely punctate. Hind body sordid red, with the two terminal segments more or less infuscate.

The male has a small notch on the last ventral plate, and its front tarsi rather strongly dilated.

Only four examples have been received from Mexico, but Mr. Champion secured eighteen specimens at San Gerónimo.

8. **Actobius nitidulus.** (Tab. XII. fig. 6.)

Angustus, niger, parce pubescens et punctatus; elytris margine posteriore pedibusque pallide testaceis, antennis sordide testaceis.
Long. 4 millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*).

Antennæ dark yellow, the penultimate joint not quite so long as broad. Head sparingly punctured, with a broad space on the middle smooth. Thorax narrow, a good deal narrower than the elytra, evidently narrowed behind, with two widely separated series of punctures along the middle, and with a few lateral punctures. Hind body slightly broader from the base till beyond the middle, the basal segments each very deeply transversely depressed at the base, each segment with the hind margin more or less definitely pallid.

This species is a very distinct one, the sparing punctuation and the less parallel form distinguishing it satisfactorily from its congeners in our fauna. The punctuation on the wing-cases is almost confined to the basal part, becoming so very scanty and obsolete

behind that the terminal half may be said to be impunctate. The dilatation of the male front tarsi is but slight, and there is only a small notch on the last ventral plate.

A good series of examples has been obtained.

9. **Actobius politus.**

Angustus, parce punctatus et pubescens, nitidulus, fusco-rufus; capite elytrisque nigricantibus, his margine apicali pedibusque pallide testaceis; abdomine apicem versus nigricante, antennarum basi testacea.
Long. $3\frac{1}{2}$ millim.

Hab. Mexico (*Flohr*).

This little insect is closely allied to *A. nitidulus*, and like it has the punctuation of the head, thorax, and elytra much reduced, there being only a few punctures on each; it is, however, readily distinguished by the more pallid coloration, in which respect it more resembles *A. mixtus*. The single example received is also smaller than any specimen of *A. nitidulus*; it is I believe a female.

10. **Actobius delicatulus.** (Tab. XII. fig. 7.)

Angustulus, nitidus, minus parallelus, rufus; capite nigro, elytris nigricantibus, margine apicali pedibusque testaceis; abdomine apicem versus fusco-cingulato, pectore infuscato; antennis sordide testaceis, basi diluta; capite thoraceque crebre minus fortiter, elytris parce obsoleteque, punctatis.
Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, Pantaleon 1700 feet, Paso Antonio 400 feet (*Champion*).

This species is very distinct from any of the others described here; it is of narrow, slender form, the penultimate joint of the antennæ about as long as broad, the head rather narrow, and the punctuation on it as well as on the thorax neither coarse nor close; the elytral punctuation is obsolete and distant, but the pubescence is quite distinct, and the hind margin is broadly yellow. The hind body is a little narrowed near the base; it is of a rather dusky red colour, the terminal and penultimate segments more or less definitely marked with fuscous, the colour between these two patches being yellow rather than red. The tarsi are rather elongate.

The male front tarsi are but little dilated, and the notch on the last ventral plate is but small.

Three examples were found at Pantaleon and four at Paso Antonio.

11. **Actobius alternans.** (Tab. XII. fig. 8.)

Parallelus, minus nitidus, rufo-testaceus; capite, elytris, pectore abdominisque apice, nigris; antennis sordide testaceis, basi diluta; capite thoraceque crebre fortiter, elytris dense subtiliter, punctatis.
Long. 5–6 millim.

Hab. Guatemala, San Gerónimo, Torola, Paso Antonio (*Champion*).

Antennæ stout, not elongate, penultimate joints distinctly transverse. Head quadrate, coarsely and rather closely punctate, with a space along the middle smooth. Thoracic

punctuation similar to that of the head. Elytra closely and finely punctate, not shining. Hind body densely and extremely finely punctate, the transverse impression at the base of each of the basal four segments deep, but with only indistinct crenate punctuation.

The male front tarsi are much dilated, and there is a broad not deep emargination on the last ventral plate; the front tarsi of the female are a good deal dilated.

HOLISUS.

Holisus, Erichson, Gen. et Spec. Staph. p. 298.
Piestomorphus, Motschoulsky, Bull. Mosc. 1858, ii. p. 666, t. 1. f. *l*.

This is a genus peculiar to Tropical America, where it ranges from Mexico to Rio de Janeiro, and has included hitherto eleven species. It is a very peculiar genus without any close ally, and its components are apparently insects of great rarity, being only occasionally met with, and then only in one or two examples; the species are apparently very closely allied, external sexual characters being confined to a difference in the medial lobe of the terminal armature; so that under these circumstances the species can only be at present very imperfectly differentiated. Mr. Champion tells me that these insects are subcortical in their habits, as, indeed, might have been inferred from their very depressed flat form.

1. **Holisus protensus.**

Depressus, nigerrimus, nitidus; coxis anterioribus rufis, tarsis piceis, capite oblongo-quadrato, crebrius fortiter punctato; thorace brevi; elytris crebre subtiliter punctatis.
Long. 7 millim.

Hab. GUATEMALA, San Gerónimo, Rio Maria Linda (*Champion*).

Head oblong, with numerous punctures on the front, and others on each side, leaving a rather large triangular space on the middle free from punctuation. Thorax short, a good deal shorter than broad, narrowed behind, hind angles very obtuse; there is a channel in the middle behind, and the lateral punctures are rather numerous. The elytra are not elongate, and their punctuation is fine and not close. The hind body is much narrowed behind, rather coarsely and not closely punctate. Metasternum channelled in the middle behind, and with a rather large fovea on the channel.

Three examples have been met with. The best characters for distinguishing the species are the moderately elongate head, the unusually stout antennæ, and the intense black colour, with which the rufous anterior coxæ form a strong contrast.

2. **Holisus confinis.**

Depressus, nigro-piceus, nitidus; tarsis piceis, capite oblongo-quadrato, crebrius fortiter punctato; thorace brevi; elytris crebrius subtiliusque punctatis.
Long. 7 millim.

Hab. Panama, Bugaba (*Champion*).

Very closely allied to *H. protensus*, and distinguished, so far as I can see, only by the slight characters mentioned in the diagnosis, and the less stout antennæ; the most important of the distinctions is the finer and closer punctuation of the wing-cases.

3. **Holisus solskyi.**

? *Holisus ater*, Solsky, Hor. Soc. Ross. v. p. 141 [1] (nec Motsch.).

Depressus, niger, nitidus; pedibus piceis, capite oblongo-quadrato, crebrius fortiter punctato; elytris crebrius minus subtiliter punctatis, apicem versus picescentibus; abdomine fortiter punctato.
Long. 6 millim.

Hab. Mexico [1], Cordova (*Sallé*).

This is extremely similar to *H. protensus*, but is readily distinguished by the greater number of punctures on the head and thorax; on the former these are so numerous that the medial triangular space is only indefinite, while those on the front part are not recognizable as forming three patches; there is no channel on the base of the thorax behind, and this segment is longer and narrower than it is in *H. protensus*. The metasternum is channelled but not foveolate behind.

Three examples have been obtained. The present species is certainly not the *Piestomorphus ater*, Motschoulsky; that species is found in Colombia, and our insect does not agree with Motschoulsky's description. Although Solsky's record of *H. ater*, Motsch., as a Mexican insect is probably erroneous, yet it is possible that he may not have referred to the present species; but in the absence of any indication of the occurrence of a second species in Mexico, we naturally treat his record as referring to the one known.

4. **Holisus prolixus.** (Tab. XII. fig. 9.)

Depressus, nigerrimus, nitidus; pedibus piceis, capite subquadrato, crebre fortiter punctato; thorace brevi; elytris crebre subtiliter punctatis.
Long. 6½–7 millim.

Hab. Guatemala, Cahabon, and San Juan in Vera Paz (*Champion*).

Of slender, elongate form, with the hind body gradually narrowed towards the apex. The head is very shining and its punctures are coarse, and consist of a large patch on each side behind, and three smaller patches on the front; the anterior of these is on the middle of the front, and consists of three closely placed punctures. The thoracic punctures are coarse but not numerous; and the punctuation of the elytra and hind body is not coarse, and is moderately close; on the under surface of the latter it is denser and coarser.

This is very closely allied to *H. protensus*, but is smaller and more slender, and the punctures on the head are less numerous. Four examples were met with. The one figured is a female found at Cahabon.

5. **Holisus atratulus.**

Angustus, depressus, nigerrimus, nitidulus, pedibus nigro-piceis; capite oblongo-quadrato, crebrius fortiter punctato; prothorace minus brevi; elytris crebrius subtiliter, abdomine minus subtiliter, punctatis.
Long. 4½ millim.

Hab. GUATEMALA, El Tumbador 2500 feet, Capetillo (*Champion*).

Closely allied to *H. prolixus*, but considerably smaller and narrower, with less transverse thorax, more numerous punctures on the head, and rather closer punctuation of the elytra and hind body.

Two examples were found at El Tumbador, one at Capetillo.

6. **Holisus filum.**

Parvus, omnium maxime depressus, angustus, parallelus, flavus; elytris fuscescentibus; capite thoraceque crebrius punctatis, hoc linea mediali lævigata; elytris dense subtilius punctatis.
Long. 3 millim.

Hab. GUATEMALA, Teleman in the Polochic valley (*Champion*).

Antennæ entirely yellow. Head quadrate, with numerous coarse punctures, leaving a longitudinal space along the middle smooth, and in front indefinitely canaliculate. Thorax with rather numerous coarse punctures evenly distributed, but leaving a space along the middle smooth. Elytra very closely and finely, hind body extremely finely, punctate.

Only one example has been found of this distinct, minute species.

7. **Holisus pallens.**

Parvus, depressus, rufescens; capite, elytris abdomineque fuscescentibus; capite thoraceque crebrius fortiter punctatis, hoc linea mediali lævigata; elytris abdomineque subtiliter fere dense punctatis.
Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This little insect has the thorax unusually long, it being about as long as the head; it resembles in most respects *H. filum*, and has a similar punctuation on the head and thorax, but the elytra and hind body are less densely and finely punctured. Only one example has been met with.

8. **Holisus rufipes.**

Nigro-piceus, nitidus; pedibus antennarumque basi rufis; abdomine piceo apicem versus dilutiore, rufo; capite oblongo; prothorace minus brevi; elytris nitidulis, minus crebre et minus fortiter punctatis; abdomine dense fortiterque punctato.
Long. 6–7 millim.

Hab. GUATEMALA, San Gerónimo 3000 feet (*Champion*).

Head very shining, its punctures not coarse, and not distinctly arranged in patches,

without impression on the front margin in the middle. Thorax rather elongate, as long as broad, the punctures on either side not very numerous, and not coarse.

This species has the head rather longer than is usual, and the hind body more coarsely and densely punctate. Only two examples have been found.

9. **Holisus oblitus.** (Tab. XII. fig. 10.)

Angustulus, depressus, niger; elytris sordide testaceis, basi nigricante, pedibus fuscis; abdominis segmento ultimo posterius plus minusve anguste rufo; capite thoraceque crebrius punctatis; elytris dense subtiliter, abdomine dense fortiter, punctatis.

Long. 5–6 millim.

Hab. GUATEMALA, near the city, Cerro Zunil 4000 to 5000 feet, Purula (*Champion*).

Head quadrate, black, its punctures very numerous so that the medial smooth space is greatly reduced and obscure. Thorax rather short, its punctures numerous. Elytra elongate, densely and not finely punctate, the punctures being rather deep and definite. Hind body black, the hind margins of the segments more or less distinctly ferruginous, the terminal segment more broadly so than the others.

Eight examples have been found; of these four from Cerro Zunil and two from Guatemala city agree pretty closely; the one from Capetillo has the hind body blacker, while, on the contrary, the example from Purula has the terminal segment entirely rufescent, and the hind margin of the one preceding rather broadly of that colour. The example figured is a male found at Cerro Zunil.

10. **Holisus elatus.** (Tab. XII. fig. 11.)

Latior, depressus, nitidus, rufus; capite nigro, abdominis segmentis basalibus late fuscescentibus; elytris subopacis, crebre subtiliter punctatis.

Long. 7 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Head quadrate, its punctures numerous and coarse; the triangular central space free from punctures is large, and the anterior punctures form three definite patches. Thorax greatly narrowed behind, its punctures moderately numerous. Elytra dull, of a more pallid red colour than the thorax. Hind body coarsely and closely, the apical segments more sparingly, punctate.

The two examples found at San Gerónimo differ somewhat in the extent of development of the black colour of the hind body: the one figured is the darker of these. The examples from Bugaba are a good deal narrower than the type, and the two from the Volcan de Chiriqui are also slight varieties.

11. **Holisus eleusoides.**

Testaceus, depressus; capite nigricante, thorace piceo; antennis fuscis, basi rufa; elytris dense subtiliter punctatis.
Long. $5\frac{1}{2}$–6 millim.

Hab. GUATEMALA, Las Mercedes 3000 feet, Cerro Zunil 4000–5000 feet (*Champion*).

Head very shining, its punctures rather coarse but not numerous, and absent from a longitudinal space along the middle. Thorax rather elongate, greatly narrowed behind; its hind angles obtuse, not rounded; its punctures not very coarse and not very numerous, consisting (on each side) of seven or eight in an irregular series, and eight to ten outside of these. Elytra pallid yellow, dull, densely and finely punctate. Hind body rather broad, entirely yellow, rather closely, moderately coarsely punctate.

Only one example was found in each locality.

Group **XANTHOLININA.**

DIOCHUS.

Diochus, Erichson, Gen. et Spec. p. 300.

This is a genus with a wide distribution, although only about twelve species are known; it has been found in Australia, India, Southern Europe, and the United States of North America, as well as in South America. The species are minute insects, with feeble external specific characters, and are found, Mr. Champion informs me, on the sandy banks of streams.

1. **Diochus nanus.**

Diochus nanus, Er. Gen. et Spec. p. 301 [1].

Hab. GUATEMALA, Paraiso 300 feet (*Champion*); PANAMA, San Miguel in the Pearl Islands (*Champion*).—SOUTH AMERICA, Colombia [1].

A series of sixteen examples exhibiting no notable variation was secured in the Pearl Islands. The unique example from Paraiso is a very small pallid variety.

2. **Diochus inornatus.** (Tab. XII. fig. 12.)

Piceus, nitidus; prothorace dilutiore, abdomine piceo-testaceo; antennis pedibusque testaceis, illis parum elongatis, articulis penultimis transversis.
Long. 4 millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba 800–1500 feet, Tolé, Peña Blanca 3000–4000 feet (*Champion*).

Antennæ entirely yellow, rather stout, a little thickened externally; second and third joints subequal in length, fourth about as long as broad, seventh to tenth transverse. Head piceous, rather small. Thorax longer than broad, narrower than the elytra, very

shining, of a dilute piceous colour, with four punctures placed near one another on the middle behind, and with five other punctures on each side. Elytra shorter than the thorax, shining, with but few punctures. Hind body quite dull, very densely and finely punctate, fusco-piceous; the segments ferruginous behind, and more broadly so at the extremity.

This species differs from *D. nanus* by its larger size and much larger antennæ, these being both longer and stouter. Five examples in all were secured; the one figured was found at Peña Blanca.

3. **Diochus schaumi.**

Diochus schaumi, Krz. Wien. ent. Monat. iv. 1860, p. 27 [1].

Hab. North America, Louisiana [1].—Guatemala, Paso Antonio 400 feet, Paraiso 300 feet, San Joaquin in Vera Paz (*Champion*); Nicaragua, Managua (*Sallé*).

4. **Diochus vilis.**

Angustus, nigro-piceus, nitidus; abdomine apice dilutiore, antennarum basi, palpis pedibusque testaceis; capite parvo, angustulo; antennis minus crassis, articulis penultimis leviter transversis; abdomine subtiliter, segmento ultimo parce, punctato.
Long. 4 millim.

Hab. Guatemala, near the city (*Champion*).

This species is very closely allied to *D. schaumi*, but is slightly smaller and of darker colour, with a narrower head and rather more feeble antennæ; the elytra are a little longer, and the punctuation of the hind body is not quite so dense and fine.

Only two examples were met with.

AGRODES.

Agrodes, Nordmann, Symb. p. 161; Sharp, Trans. Ent. Soc. Lond. 1876, p. 192.
Sterculia, Erichson, Gen. et Spec. p. 301 (pars).

This genus is no doubt confined to the regions of Tropical America, where specimens of four species have been procured, two being from the valley of the Amazons.

1. **Agrodes longicornis.** (Tab. XII. fig. 13.)

Cyaneus, nitidus; abdomine corporeque subtus viridescentibus; capite fere elliptico, rugoso-punctato, posterius nitido et obsolete punctato; prothorace obsolete subtiliter punctato; elytris setis subtilibus erectis sat dense vestitis.
Long. 20 millim.

Hab. Nicaragua, Chontales (*Belt*).

Antennæ slender, extending backwards as far as three fourths of the length of the thorax. Head with the vertex narrowed to the neck by a rather gentle curve, which does not extend forwards more than one fourth of the length; eyes convex, surface

deeply and coarsely rugosely punctate, but the punctuation on the narrowed portion is obsolete, so that the surface there is shining. Thorax slender, a good deal narrowed from the middle towards the front, and very slightly towards the base; the surface very shining, very finely punctate, and with a broad impunctate space along the middle. Elytra as long as the thorax, only minutely punctate, but with an erect black hair arising from each puncture.

The sex of the unique individual is uncertain.

STERCULIA.

Sterculia, Laporte, Etudes Ent. p. 118; Erichson, Gen. et Spec. p. 301.

This is another Tropical American genus of large and brilliant Staphylinidæ; I have already excluded from it *Agrodes*, which was improperly sunk by Erichson, and I propose also to further limit it by the establishment of *Plochionocerus* for *S. formicaria* and its allies. With these reductions the genus will still consist of about fifteen species, found in various parts of Tropical America.

Mr. Champion captured most of the specimens he met with flying over dead leaves in the sunny openings in the forests.

1. **Sterculia fulgens.**

Aræocnemus fulgens, Nordm. Symb. p. 164[1].
Sterculia fulgens, Er. Gen. et Spec. p. 303[2].
? *Staphylinus fulgens,* Fabr. Ent. Syst. i. pt. 2, p. 522[3].

Hab. MEXICO[1 2] (*Flohr, Guérin-Meneville*), Cordova (*Sallé*), Jalapa (*Höge*).—? SOUTH AMERICA, Cayenne[3].

The nine examples before me vary slightly in colour and in the length of the mandibles, the differences in this latter respect being probably sexual. It is very doubtful whether this be really the Fabrician species, the only evidence to that effect being Erichson's belief that the insect he described[2] agreed with the description given by Fabricius[3]. I doubt extremely whether our Mexican species will be found to occur in Cayenne; and if not, it will be necessary to give it a fresh name, a course which need not be adopted, however, till the evidence is more complete.

2. **Sterculia mandibularis.**

Cyaneo-purpurea, nitida; thorace quam elytra paulo breviore; capite oblongo-elliptico, minus angusto, densissime minus grosse punctato, subtus disperse minus grosse punctato; mandibulis elongatis, capitis longitudine. Long. 22 millim.

Hab. MEXICO, Jalapa (*Höge*); NICARAGUA, Chontales (*Janson*).

Antennæ moderately long, penultimate joint strongly transverse, not in the least longer than the one preceding it; terminal joint rather short. Head very densely and

deeply punctate, the ocelli of the punctures unusually indistinct. Mandibles very nearly as long as the head. Elytra finely and sparingly punctate.

This species is very closely allied to *S. fulgens*, Er., and has a similar structure of the antennæ, but it has longer mandibles, a rather broader head, and the punctures on the under surface of this are less coarse and numerous and scattered irregularly over its surface. I have seen only two examples from Mexico and one from Nicaragua.

3. **Sterculia basalis.**

Viridis, nitida; capite thoraceque cyaneo-viridibus; capite oblongo-elliptico, minus angusto, densissime minus grosse punctato, subtus disperse minus grosse punctato, mandibulis elongatis; elytris quam thorax longioribus, basi subtiliter rugoso-punctata.
Long. 20 millim.

Hab. Mexico (*ex coll. Guérin-Meneville*), Jalapa (*Höge*).

This species, of which I have seen only one typical example, of the male sex, agrees with *S. mandibularis* in the structure of the antennæ and the elongate mandibles, but differs in colour, and in the existence of a peculiar rugose, though obsolete, punctuation at the base of the elytra. A second example found by Herr Höge differs in the colour being less green, but is, I think, certainly the same species.

4. **Sterculia humeralis.** (Tab. XII. fig. 14.)

Purpurea; subtus viridi-cyanea, nitida; antennis gracilibus, articulo penultimo haud transverso; capite angusto, oblongo, supra dense fortius rugoso-punctato, opaco, subtus grosse punctato, nitidissimo, mandibulis brevibus; prothorace angustulo, utrinque crebre sat fortiter punctato, area longitudinali lævigata, lata, utrinque basin versus conspicue impressa; elytris quam thorax paulo longioribus, minus subtiliter punctatis, sat nitidis, ad humeros sæpius viridi-nitentibus.
Long. 22–25 millim.

Hab. Panama, Volcan de Chiriqui 2500 to 6000 feet (*Champion*).—South America, Colombia, Venezuela (*coll. Sharp*).

This is readily distinguished from *S. fulgens*, Er., by the antennal structure, and the importance of this character is confirmed by numerous other minor characters, which show but little variation in the series of twelve examples before me. The antennæ are 7 millim. long, the third joint is elongate, the fourth to the ninth transverse, the tenth much longer than the ninth and as long as broad, the terminal joint also is rather elongate. The punctuation of the upper surface of the head is coarse, and the ocelli of the punctures are easily detected; the mandibles are much shorter than the head.

5. **Sterculia pollens.**

Robustior, viridi-cyanea; capite latiore, nigro-cyaneo, obscuriore, omnium densissime minus fortiter rugoso-punctato, subtus nitidissimo, vage, parce, haud grosse punctato, mandibulis gracilibus perelongatis; thorace minus gracili, utrinque sat fortiter punctato, area longitudinali in medio sat lata lævigata, utrinque basin versus sat conspicue impressa; elytris elongatis, tantum subtiliter obsoleteque punctatis.
Long. 25 millim.

Hab. Guatemala, Coban in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*); Costa Rica, Cache (*Rogers*).

This species is readily distinguished by the very elongate slender apical portion of the mandibles and the broad head, the latter with unusually dense but less coarse punctuation than in the allied forms. The antennæ are rather stout, but not thicker towards the extremity; the penultimate four joints similar to one another, evidently transverse. The head behind is convex, its angles broadly and regularly rounded.

Only one example was sent from each locality.

6. **Sterculia puncticeps.**

Purpurea, nitida; capite sat lato, posterius rotundato-truncato, supra opaco densissime fortiter punctato, subtus nitidissimo densissime grosse punctato; prothorace gracili, ad latera tantum obsolete punctato, utrinque vix impresso; elytris obsolete, parce punctatis.

Long. 22 millim.

Hab. Costa Rica (*Van Patten*).

This is one of a group of species distinguished by the more slender thorax, which is only indistinctly impressed. *S. puncticeps* is remarkable on account of the great development of the punctuation on the under surface of the head. The antennæ are moderately slender, not thicker towards the extremity, the penultimate four joints subequal, transverse, but not strongly so; the mandibles are only of moderate length.

Only one example has been procured.

7. **Sterculia discedens.**

Minor, læte viridi-cyanea, nitida; capite convexo, dense minus rugose punctato; prothorace minus gracili, sublævigato, margine laterali pone medium conspicuo; elytris parce minus obsolete punctatis.

Long. 15 millim.

Hab. Guatemala, Quiche Mountains 7000–9000 feet (*Champion*).

This is quite dissimilar to any other species of the genus. The antennæ are stout, a little thickened towards the apex, with the penultimate joints strongly transverse; and the apical portion of the mandibles is rather elongate. The punctuation of the head is less rugose than in the other species, so that the interstices are distinctly shining. The thorax has no distinct lateral impression, but appears nevertheless to be somewhat impressed at the side some distance in front of the base, owing to the lateral margin being remarkably elevated at this spot; it bears numerous long erect hairs, but has no punctuation. The punctuation of the wing-cases and hind body, though fine and distant, is less obsolete than in other species, and on the under surface of the head the punctures are very dense at the base.

Only one example was met with.

PLOCHIONOCERUS.

Palpi breves, labiales articulo ultimo parum incrassato. Prothorax elongatus, linea marginali superiore subtus divergente ante medium prolongato.

This genus is established for *Sterculia formicaria* and its allies. Besides a marked difference in facies arising from the different colour and sculpture and the more linear form, they differ constantly by the shorter trophi and less dilated rather differently shaped terminal joint of the labial palpi, and also by the superior marginal line of the thorax; this latter in true *Sterculia* is peculiar; on the basal half it limits the superior pagina from the side, but about the middle becomes suddenly obsolete and very abruptly deflexed, while a false margin of a more or less distinct character is continued forwards from the point where the true marginal line is directed downwards. In *Plochionocerus*, on the contrary, the true marginal line is diverted downwards without disappearing, and is continued forwards to the prosternum, and there is no false marginal line on the anterior part of the thorax.

Plochionocerus, like *Sterculia* and *Agrodes*, is no doubt peculiar to Tropical America, and comprises, in addition to the species here mentioned, *S. funebris*, *S. fimetaria*, *S. clavicornis*, and *S. minor*, Sharp.

Mr. Champion informs me these insects are found running on the roads and paths, and look like large ants.

1. **Plochionocerus brachypterus.** (Tab. XII. fig. 15.)

Elongatus, nigro-subæneus, griseo-pubescens, opacus, densissime punctatus; palpis, antennis tarsisque piceis; elytris quam thorax brevioribus, omnium densissime punctatis; thorace linea mediali antice latiuscula lævigata; abdomine subnitido, minus dense punctato.

Long. 17 millim.

Hab. Mexico, Cordova (*Sallé*), Misantla (*Höge*); Guatemala, Cerro Zunil 4000 to 5000 feet, Las Mercedes 3000 feet, Zapote (*Champion*); Honduras (*Sallé*); Panama, Bugaba (*Champion*).

Although closely allied to *P. formicarius*, this species is readily distinguishable by the short elytra; it is also less black in colour, and somewhat smaller in size. It is apparently a rare insect, for although it has been procured in several localities, only nine examples have been obtained. They do not exhibit much variation, except that the two individuals from Bugaba are somewhat larger and darker in colour.

The specimen figured was found at Cerro Zunil.

2. **Plochionocerus formicarius.**

Sterculia formicaria, Er. Gen. et Spec. Staph. p. 304[1]; ? Lap. Et. Ent. p. 119, pl. 3. f. 3[2].

Aræocnemus flagellicornis, Nordm. Symb. p. 165[3].

Hab. Costa Rica, Cache (*Rogers*).—South America[1 2 3], Colombia[1], Cayenne[1], &c.

Only one example has been procured in our region, and it may ultimately prove to be distinct from the South-American *P. formicarius*; but at present it must be treated as a variety of a variable species.

3. **Plochionocerus debilis.**

Minor, elongatus, nigro-æneus, subnitidus; abdominis apice rufo, capite suboblongo, dense fortiter punctato, opaco; thorace minus gracili, crebre subtiliter punctato, subnitido, linea mediali lævigata; elytris thoracis longitudine, crebre subtiliter punctatis, sat nitidis; capite subtus densius fortiter punctato.

Long. 12 millim.

Hab. GUATEMALA, San Gerónimo and San Joaquin in Vera Paz (*Champion*).

Antennæ stout, black, a good deal thickened towards the extremity. Thorax broad (for this genus), but a good deal narrower than the elytra. Last segment of the hind body red.

This is the smallest species of the genus, and should be placed after *P. minor*, from which it is distinguished by its smaller size, more parallel form, by the red extremity of the hind body, and slight differences in the sculpture of the different parts of the body.

Only one example was met with in each locality.

HOMALOLINUS.

Corpus depressum, fere lævigatum, capite angulis posterioribus haud rotundatis, medio canaliculato (canalicula antice bifurcata) utrinque sulcula curvata breviore, collo perabrupto angusto. Labrum late emarginatum longissime ciliatum. Palpi graciles, elongati, articulo ultimo quam præcedens longiore. Tarsi anteriores graciles. Prothorax anterius in medio rotundatus, linea laterali superiore subtus abrupte sinuato-deflexa; prosternum magnum, haud carinatum.

This genus is proposed for *Xantholinus canaliculatus*, Er., and allies; it should be placed near *Nudobius*, from which it departs by the sculpture of the head, the much more elongate trophi (the difference as to the terminal joint of the labial palpi in the two being very great), and also by the fact that the superior marginal line of the thorax, notwithstanding its great deflection, does not reach the inferior line, but remains quite separate from it even at the front of the coxal cavity.

The different species live under bark of trees; and the genus seems specially characteristic of our region, one species extending its range to Rio de Janeiro.

1. **Homalolinus canaliculatus.** (Tab. XII. fig. 17.)

Xantholinus canaliculatus, Er. Gen. et Spec. p. 307 [1].

Hab. MEXICO [1], Cordova, Tuxtla (*Sallé*), Jalapa (*Flohr*, *Höge*), Cerro de Plumas (*Höge*); GUATEMALA, Capetillo, Cerro Zunil, Las Mercedes (*Champion*); COSTA RICA, Cache, Irazu 6000–7000 feet (*Rogers*); PANAMA, Volcan de Chiriqui up to 6000 feet, Tolé (*Champion*).—SOUTH AMERICA, Colombia [1], Brazil.

This species is found under bark of dead trees, and I have a fine series before me

showing some interesting points of variation. The head varies in its development, and in small individuals has the hind angles obtuse, and departs comparatively little from the shape normal in the Xantholinina. In the larger examples found in the State of Panama and Costa Rica the sides of the head have a concave emargination, and a specimen of this variety from Irazu is represented on our Plate. The extent of the red colour at the extremity of the hind body is also variable, there being in this respect two forms, which apparently are not found in company: in the first the penultimate segment is black at the base, its hind margin and the whole of the terminal segment being red; while in the second form the whole of these two segments is red; all the Mexican examples belong to the first of these varieties, except the single example from Tuxtla, while in the more southern parts of our area the two forms occur about equally, not being, however (if I may judge from the labels attached to our specimens), found in company.

2. **Homalolinus flavipennis.**

Xantholinus flavipennis, Er. Gen. et Spec. p. 307 [1].

Hab. Mexico [1], Oaxaca (*Sallé*), Cerro de Plumas (*Höge*).

The three examples before me of this species indicate that the head may probably vary in shape like that of *H. canaliculatus*; so that importance must not be attached to Erichson's describing the hind angles as obtuse.

3. **Homalolinus affinis.**

Elongatus, angustulus, depressus, nitidissimus, niger, elytris anoque rufis; capite medio canaliculato, utrinque sulcato, sulcis latis, posterius punctatis, subtus vage punctato.
Long. 20 millim.

Hab. Guatemala, Purula, San Gerónimo (*Champion*).

This species is very similar to *H. flavipennis*, but has the terminal segment and the hind margin of the penultimate segment red; the elytra are almost impunctate, the punctures along the suture and on the disc being very indistinct; the lateral grooves of the head are broad and indefinite behind, and exhibit some punctures about their termination, and there is also a scattered punctuation on the under surface of the head.

Only two examples have been met with.

4. **Homalolinus dilutus.**

Elongatus, angustus, depressus, nitidissimus, brunneo-testaceus, capite nigro; hoc subtriangulari, medio canaliculato, utrinque latius sulcato.
Long. 20 millim.

Hab. Mexico, Parada (*Sallé*).

This species, though differing so much in colour from *H. canaliculatus*, is in other respects excessively similar thereto; the short lateral grooves of the head, however, are

broader and their inner margin is indefinite, and there are a few indefinite punctures near their termination; on the under surface the lateral grooves are deep and moderately broad, and are very finely sculptured; but there is no other punctuation.

Three examples.

5. **Homalolinus apicalis.** (Tab. XII. fig. 18.)

Elongatus, angustus, depressus, nitidissimus, brunneo-testaceus, capite abdomineque ante apicem nigris; capite suboblongo, anterius parum angustato, medio canaliculato, utrinque minus argute et profunde sulcato. Long. 20 millim.

Hab. Mexico, Juquila (*Sallé*).

This species differs from *H. dilutus* in that the penultimate and terminal segments are black, the hind margin of the latter, as well as the armature segment, being, however, pale; it is in proportion to its length the narrowest of the genus, and the head is very little narrowed in front, its vertex rounded; the lateral channels on the head are rather broad and indefinite, there is no punctuation behind them, but there are a few punctures outside them, connecting with the lateral punctuation.

Only two examples are before me.

6. **Homalolinus sanguineus.**

Elongatus, angustus, depressus, nitidissimus, rufus; capite abdomineque nigris, hoc apice rufo, antennis piceis; capite subquadrato, anterius sat angustato, medio canaliculato, utrinque sulcato. Long. 15 millim.

Hab. Guatemala, near the city (*Salvin*), Calderas, Dueñas, Capetillo, San Gerónimo 3000 feet, Cerro Zunil 4000 to 5000 feet (*Champion*).

This species is very similar to *H. divisus*, but has a bright red thorax, and the head is rather broader and shorter. From the various localities where it has been found I have in all eight examples before me, showing a little variation in size, and in the form of the head.

7. **Homalolinus divisus.**

Xantholinus divisus, Er. Gen. et Spec. p. 308[1].

Hab. Mexico, Vera Cruz (*coll. Chevrolat*)[1], Cordova (*Sallé*), Jalapa, Cerro de Plumas, Oaxaca (*Höge*).

Var. *guatemalenus*. Minor et angustior, capite magis oblongo, vertice minus truncato, sulcis lateralibus angustioribus magis argutis.

Hab. Guatemala, San Gerónimo, Balheu (*Champion*).

I have been able to examine a good series of Mexican examples, and though individuals vary a good deal in size, in other respects there is but slight difference; one example from Oaxaca has the two terminal segments entirely red, while in all the others the base of

the penultimate segment is black. The slight differences exhibited by the four examples from Guatemala are not, I feel sure, of specific importance.

HETEROLINUS.

Corpus depressum, fere lævigatum, capite latissimo anterius angustato, collo perabrupto, angusto. Labrum sat elongatum, leviter emarginatum, longissime ciliatum. Palpi graciles, elongati, articulo ultimo quam præcedens longiore. Tarsi anteriores subdilatati. Prothorax linea laterali superiore subtus abrupte sinuato-deflexa; prosternum magnum, posterius in medio carinato-compressum.

The remarkable insect for which this genus is established, though possessing a resemblance in facies with *Homalolinus*, differs in so many characters as to render it very distinct; the head is without the channels seen in *Homalolinus*, the labrum is elongate, the front tarsi are broad instead of slender, the two thoracic marginal lines are joined behind the prosternum, and this latter in the middle behind is carinate, the carina being continued as a compressed process, extending back between the coxæ.

The unique species is found in Colombia as well as in our region.

1. **Heterolinus puncticeps.** (Tab. XII. fig. 19.)

Xantholinus puncticeps, Guérin, Rev. Zool. 1844, p. 11[1].

Hab. Costa Rica (*Van Patten*).—South America, Colombia[1].

The unique example differs from the Colombian type by its great size and the enormous development of its head, which has longer mandibles having a more curved and slender extremity; but I think it is only an extreme development of the Colombian species, of which I know, however, but a single example.

TESBA.

Tesba, Sharp, Trans. Ent. Soc. Lond. 1876, p. 194.

This genus comprises two species from the Amazons valley, besides one found in our region.

1. **Tesba belti.** (Tab. XII. fig. 16.)

Tesba belti, Sharp, Trans. Ent. Soc. Lond. 1876, p. 431[1].

Hab. Nicaragua, Chontales (*Belt*)[1].

XANTHOLINUS.

Xantholinus, Serville, Encycl. Méth. x. p. 475 (1825); Erichson, Gen. et Spec. p. 306.
Eulissus, Mannerheim, Précis, Brach. p. 35; Mun. Cat. Col. ii. p. 600.

This genus, after abstraction of *Gauropterus* and *Nudobius*, still remains a very extensive one, having something like 150 described species; it has an almost cosmopolitan distribution, and comprises a number of varied forms. At present I find it impossible to separate *Eulissus* by any characters that do not reappear in some of the species

at present located in *Xantholinus*, and accordingly, for the purposes of this work, the two are treated as one genus.

1. **Xantholinus chalybeus.**

Eulissus chalybeus, Mann. Précis, Brach. p. 35 [1].
Xantholinus chalybeus, Er. Gen. et Spec. p. 309 [2].
Staphylinus saphyreus, Perty, Del. An. Art. p. 31, t. 7. f. 5 [3].

Hab. MEXICO, Presidio (*Forrer*), Cordova (*Flohr*, *Höge*, *Sallé*), Santecomapan, Tehuantepec (*Sallé*), S.W. Yucatan; GUATEMALA, Panzos, Teleman, Chacoj, and La Tinta in the Polochic valley, Mirandilla (*Champion*); NICARAGUA, Chontales (*Janson*), Granada (*Sallé*); PANAMA, Tolé, Bugaba, Volcan de Chiriqui (*Champion*).—SOUTH AMERICA, Brazil [1 2 3].

Found in fresh dung in the low hot forest region (*Champion*).

2. **Xantholinus rutilus.**

Staphylinus rutilus, Perty, Del. An. Art. p. 30, t. 7. f. 2 [1].
Xantholinus rutilus, Er. Gen. et Spec. p. 318 [2].

Hab. PANAMA, David, Bugaba, Volcan de Chiriqui, below 4000 feet (*Champion*).—SOUTH AMERICA, Brazil [1 2].

Of similar habits to the preceding species.

3. **Xantholinus nigriceps.** (Tab. XII. fig. 20.)

Xantholinus nigriceps, Guér. Rev. Zool. 1844, p. 12 [1].

Hab. MEXICO, Cordova (*Sallé*), Oaxaca (*Höge*), Jalapa (*Flohr*); GUATEMALA, Pantaleon, Chiacam (*Champion*); PANAMA, Bugaba (*Champion*).—SOUTH AMERICA, Colombia [1].

This is apparently a rare insect, represented in our collections by one or two examples from each locality. Our figure is taken from an example found at Pantaleon.

4. **Xantholinus strigiceps.**

Nigerrimus, nitidus, minus depressus; antennis pedibusque piceis; capite striguloso, tantum punctis impressis paucis; thorace absque seriebus discoidalibus, utrinque versus angulos posteriores tripunctato; elytris quam prothorax paulo brevioribus.
Long. 10–11 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Head a good deal narrowed in front, covered with fine longitudinal striæ, which are wanting, or at any rate more scanty, on the disc, and on the underside are very regular and definite; with two punctures behind the eyes, and three others forming a distant series nearer the middle. Thorax a little narrowed behind. Elytra rather shorter than the thorax, somewhat coarsely but scantily punctate, with a discoidal series of coarser punctures.

This is a very distinct species from any other; it has no carina on the prosternum, and the second and third joints of the antennæ are rather elongate.

5. **Xantholinus oculatus.**

Nitidus, rufus; capite nigro, abdominis segmentis 3°–6ᵐ late nigricantibus; capite punctis impressis tantum paucis; prothorace absque seriebus dorsalibus, utrinque versus marginem anteriorem punctis duobus; elytris sublævigatis serie discoidali punctorum majorum.
Long. 11 millim.

Hab. Nicaragua, Chontales (*Janson*).

Head narrowed in front, with large and rather prominent eyes, with only a very few punctures, one on each side between the eye and the termination of the frontal furrows, one or two just behind the eye, and some others about the vertex. Thorax very slightly narrowed behind, of a shining red colour; the only punctures it bears in addition to those at the margins are two on each side placed transversely near the front. Elytra rather longer than the thorax, pale red, shining, only obsoletely punctured, but with a distinct discoidal series of about six distant punctures, and a more indistinct sutural series. Hind body with the base red and the extremity broadly yellow, the intervening segments being blackish, their margins, however, remaining red.

6. **Xantholinus lævipennis.**

Rufus, capite abdomineque nigris, hoc apice pedibusque flavis, pronoto piceo; capite angusto, punctis impressis perpaucis; prothorace absque seriebus dorsalibus, utrinque prope latus puncto singulo, et versus marginem anteriorem punctis duobus transversim positis; elytris sublævigatis, seriebus discoidalibus et suturalibus tantum distinctis.
Long. 10 millim.

Hab. Mexico, Tuxtla (*Sallé*).

Head rather narrow, with large and rather prominent eyes, and with very few punctures, but with an oblique groove on each side at the margin of the eye.

This species is similar to *X. oculatus*; but in addition to the dark pronotum it is distinguished by the narrower form, and the head being more distinctly quadrisulcate. Only one badly-preserved example is known to me.

7. **Xantholinus rudis.** (Tab. XII. fig. 21.)

Niger, nitidus; elytris, pectore pedibusque rufis, antennis rufo-obscuris, basi picea; capite fortiter punctato, medio lævigato; elytris seriebus dorsalibus irregularibus 10–12-punctatis, lateribus crebre irregulariter punctatis.
Long. 12 millim.

Hab. Guatemala, near the city, San Gerónimo, Mirandilla 1700 feet (*Champion*).

Allied to *X. pectoralis*, Er., but readily distinguished by the more numerous punctuation of the thorax. The head is a good deal narrowed in front, with rather numerous moderately coarse punctures that are wanting on the middle. The thorax is a little narrowed behind, its punctures are coarse, and in addition to those of the dorsal series there are about twenty others on each side. The elytra are as long as the thorax, coarsely punctate; the hind body is sparingly but distinctly punctate and pubescent.

The under surface of the head is shining and rather sparingly but coarsely punctate; the prosternum, as well as the meso- and metasternum, red.

This species is found on the banks of streams; a good series was obtained. Either this or an allied species occurs in Mexico, as shown by an immature example from Sallé's collection, found at Cordova.

8. **Xantholinus fuliginosus.**

Niger, nitidus; antennis pedibusque piceis, abdominis apice rufo-obscuro; antennis articulis secundo et tertio elongatis; capite fortiter punctato; elytris seriebus dorsalibus irregularibus, multipunctatis.
Long. 13 millim.

Hab. MEXICO (*Sallé, Truqui*).

Although very similar to *X. carinatus* this species will be readily distinguished by the elongate second and third joints of the antennæ, and by the large number of punctures in the dorsal series; these punctures are, however, very irregular, and as others are placed near them at the sides, and render them still more irregular, their number can only with some hesitation be stated as about twelve; there are rather numerous irregular punctures about the sides, but these, as well as the dorsal punctures, are probably variable. The elytra are as long as the thorax, shining, somewhat coarsely punctate. The hind body is broadly dull red at the extremity. There is no trace of carination on the prosternum.

Two very badly-preserved examples from Sallé's collection, and one from Truqui, are all I have seen; Sallé's examples were probably found by Truqui.

9. **Xantholinus lacertosus.**

Nigricans, nitidus; elytris pedibusque sordide rufis, capite sat crebre minus fortiter punctato, prothorace seriebus dorsalibus obsoletis, circiter 7-punctatis, lateribus parce punctatis.
Long. 12 millim.

Hab. MEXICO, Oaxaca (*Höge*).

Second and third joints of the antennæ rather long, the latter distinctly the longer. Head oblong-oval, being somewhat narrower towards the front, its punctures rather distant and not coarse, and absent from a space along the middle. Thorax a little narrowed behind, the dorsal series consisting of about seven distant fine punctures, and the lateral punctures of about the same number placed in an irregular curved series. The elytra are not longer than the thorax, shining, obscure red, somewhat sparingly and vaguely punctured. There is no carination on the prosternum proper, but there is a rather acute elevation behind it just between the front of the coxæ; the thoracic pleura is broad in front, the superior marginal line being very little inflexed.

This is an obscure insect, but with structural characters that differentiate it thoroughly from either *X. rudis*, *X. carinatus*, or *X. fuliginosus*. Only one example has been found.

10. **Xantholinus serpens.**

Rufo-obscurus, sat nitidus; capite nigricante, oblongo-ovali, utrinque sat crebre et sat fortiter punctato; prothorace seriebus discoidalibus irregularibus circiter 12-punctatis, ad latera anterius punctis sat numerosis adjectis; elytris quam prothorax haud longioribus, sat fortiter punctatis.
Long. 9 millim.

Hab. Mexico, Oaxaca (*Höge*).

Antennæ moderately stout, scarcely thicker externally, second and third joints moderately long, the latter distinctly the longer. Head rather long and narrow, with numerous rather regularly placed moderately coarse punctures, not at all crowded, and with a longitudinal space along the middle, smooth. Thorax a little narrowed behind, the dorsal series of punctures rendered irregular by some additional punctures placed outside them, and near the sides in front with numerous punctures, which may be described as an indistinct oblique series of about ten punctures extending a great part of the length of the thorax, and outside this series in front with a few other punctures about eight in number, and two or three punctures near the hind angles. Elytra irregularly and rather coarsely punctured, the punctures most numerous about the suture, and with a not very definitely separated discoidal series. Head beneath dull, not coarsely, and rather sparingly, punctured.

This is an obscure species, without any salient character, though not very closely allied to any other; the prosternum has on its posterior part between the coxæ a very small carina, which is not prolonged in front. Only one example has been found.

11. **Xantholinus mexicanus.**

Fusco-piceus, sat nitidus; capite nigricante, antennarum basi palpis pedibusque rufis; parum punctatus; capite ad latera remote punctato; prothorace seriebus discoidalibus 7-punctatis, elytris quam thorax paulo brevioribus.
Long. 8 millim.

Hab. Mexico, Jalapa (*Höge*).

Second and third joints of the antennæ moderately long, subequal. Head convex, a little narrowed in front, its surface as well as that of the thorax very finely transversely strigose, so that it is rendered somewhat dull; the latter is elongate, distinctly narrowed behind, the punctures few and distant, there being only five or six on each side in addition to the dorsal series; elytra with only a few distant punctures. Under surface of the head with only a very few punctures; prosternum carinate; body beneath more rufescent than above; terminal joint of the maxillary and labial palpi slender but elongate.

One example.

12. **Xantholinus brachypterus.**

Piceus, sat nitidus; capite nigricante, pedibus rufis; capite utrinque sat crebre minus fortiter punctato; prothorace seriebus discoidalibus 8- vel 9-punctatis; elytris quam thorax multo brevioribus.
Long. 7 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,000 feet (*Champion*).

This species is readily distinguished by the very short elytra; it is closely allied to *X. mexicanus*, but the punctures of the head are coarser and slightly more numerous, and the transverse strigulosities are coarser, rendering the surface more distinctly dull; the maxillary palpi are a little broader; the eyes are unusually small; the second and third joints of the antennæ only moderately long, the former the longer; elytra quite obsoletely punctate.

Only one example was obtained.

13. **Xantholinus carinatus.**

Nigricans, nitidus; antennis pedibusque piceis, illis articulis secundo et tertio brevibus subæqualibus; capite utrinque parce fortiter punctato; prothorace posterius angustato, seriebus dorsalibus circiter 5-punctatis; elytris politis, parce vage punctatis; prosterno subtiliter longitudinaliter carinato.
Long. 11 millim.

Hab. MEXICO, Durasnal (*Sallé*).

This species is an ally of the European *X. punctulatus*, but has the carinate compression along the middle of the prosternum rather longer and more distinct; the surface of the prosternum is very distinctly and regularly transversely strigose, and the anterior angles of the thorax beneath are piceous. The frontal furrows are rather elongate and but little convergent; the surface of the head and thorax is very shining; the five or six punctures forming the dorsal series of the latter are rather large, and in addition to these there are about five other punctures on each side; the punctuation of the wing-cases is very obsolete.

I have seen only three examples.

14. **Xantholinus fumatus.**

Nigro-piceus, nitidus; antennis pedibusque rufis, illis articulo secundo et tertio brevibus subæqualibus; capite utrinque parce fortiter punctato; prothorace posterius angustato, seriebus dorsalibus circiter 5-punctatis; elytris politis, parce punctatis; prosterno subtiliter longitudinaliter carinato.
Long. 9 millim.

Hab. MEXICO (*Truqui*), San Andres, Guanajuato (*Sallé*), Las Vigas (*Flohr*), Oaxaca (*Höge*).

This species is much smaller and narrower than *X. carinatus*, to which it is very closely allied, but the colour is more dilute, and the punctuation of the elytra more distinct, so that I am not able at present to unite the two.

15. **Xantholinus resectus.**

Nigro-piceus, nitidus; antennis pedibusque rufo-piceis; illis articulo secundo et tertio subbrevibus; capite utrinque parce fortiter punctato; prothorace elongato, posterius angustato, seriebus dorsalibus circiter 10-punctatis; elytris nitidis, parce punctatis; prosterno subtiliter longitudinaliter carinato.
Long. 9 millim.

Hab. MEXICO (*Flohr*).

I am unable to consider the one example before me as a variety of *X. fumatus*, for not only is there a considerable increase in the punctuation of the thorax, but this part is also a good deal more elongate, the lateral punctures are also about ten in number; in other respects the differences are quite unimportant.

16. **Xantholinus alticola.**

Angustulus, elongatus, niger, nitidus; capite utrinque dense fortiter punctato; prothorace seriebus dorsalibus circiter 7-punctatis; elytris dense subtiliter punctatis, minus nitidis; pedibus piceis.
Long. 8 millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet, Quezaltenango 7800 feet (*Champion*).

This species is very readily distinguished by the regular, definite, rather close and deep punctuation of the wing-cases; there is also a minute strigosity on the head and thorax, and the underside of the former is not shining; the second and third joints of the antennæ are rather short, and there is only a very indistinct carination of the prosternum.

A considerable series was found, exhibiting but little variation; the punctures of the dorsal series (which, as in all the allies, are somewhat irregular) may be either six, seven, or eight in number.

17. **Xantholinus humilis.** (Tab. XII. fig. 22.)

Angustus, parallelus, niger, nitidus; pedibus piceis; capite utrinque fortiter punctato; prothorace elongato, posterius angustato, seriebus dorsalibus 6- vel 7-punctatis; elytris nitidis, parce punctatis, serie discoidali discreta; prosterno subtiliter longitudinaliter carinato.
Long. 7 millim.

Hab. MEXICO (*Flohr*), Jacale (*Sallé*), Jalapa (*Höge*); GUATEMALA, Capetillo, Cerro Zunil 4000 to 5000 feet (*Champion*).

This species is extremely closely allied to *X. fumatus*, but is so much smaller and narrower that it is clearly a distinct species; the punctuation of the elytra is rather more definite, and the series of discoidal punctures along the middle of each is quite distinct, and there is generally an additional puncture in the thoracic series; there are only six punctures in the lateral curved series.

18. **Xantholinus discretus.**

Angustus, parallelus, niger, nitidus; antennis pedibusque piceis; capite utrinque sat crebre punctato; prothorace elongato, seriebus dorsalibus circiter 11-punctatis; elytris nitidis, parce punctatis; prosterno anterius fere ecarinato.
Long. 8 millim.

Hab. GUATEMALA, Volcan de Agua between 8500 and 10,500 feet (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species is extremely similar to *X. humilis*, but is readily distinguished by the greater number of punctures in the dorsal series; also the second and third joints of the antennæ are a little longer, and the carination of the prosternum can scarcely be said to extend at all on to the anterior part.

Only one example was met with in each locality.

19. **Xantholinus championi.**

Minor, depressus, angustus, nitidus, niger; elytris stramineis; antennis piceis, pedibus rufis; prothorace seriebus dorsalibus 5-punctatis.

Long. 5 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

This species is very closely allied to *X. humilis*, but is considerably smaller, and is readily distinguished by the pallid elytra forming an abrupt contrast to the colour of the anterior parts; the smaller number of punctures in the thoracic series will distinguish it from any of the varieties of *X. vilis*. The antennæ are rather stout, the second and third joints quite short; the elytra are only sparingly punctate, but there is a series of punctures along the middle quite distinct from the punctuation about the suture; the head is shorter and broader than in the immediate allies, and only sparingly punctate on the sides; the prosternum is indistinctly carinate along the middle.

Three examples.

20. **Xantholinus difficilis.**

Minor, nitidus, angustus, piceus; palpis pedibusque testaceis; prothorace seriebus dorsalibus 5-punctatis sat crebre fortiter punctato.

Long. 5 millim.

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

This little insect is narrower than *X. laxus*, and has a smaller number of punctures in the thoracic series; it differs from *X. championi* in being rather smaller, with a shorter thorax and concolorous elytra, these latter being also shorter and having very little punctuation. The head is rather narrower towards the front than in the species mentioned; the punctures about its sides are not numerous, and there are only six punctures at each side of the thorax, forming a curved series.

Only a single example has been obtained.

21. **Xantholinus laxus.**

Minor, nitidus, piceus; capite nigro; palpis pedibusque testaceis; prothorace seriebus dorsalibus 7–11 punctatis; capite utrinque sat crebre fortiter punctato.

Long. 5 millim.

Hab. GUATEMALA, Aceituno (*Champion*); PANAMA, Volcan de Chiriqui up to 6000 feet, Peña Blanca 3000 to 4000 feet (*Champion*).

This obscure insect has no salient feature by which it can be recognized, but I have quite failed to reduce the examples to variations of any of the allied species. The third joint of the antennæ is quite small, evidently shorter than the short second joint; both head and thorax are oblong, the normal number of punctures in the thoracic series of the latter being apparently seven or eight.

I have treated some of the examples found on the Volcan de Chiriqui as a variety of this species, though they are somewhat larger and darker in colour, have a closer punctuation on the side of the head, an increased number of punctures (there may be as many as eleven) in the thoracic series, and a more definite punctuation of the elytra, a dorsal series of punctures being quite evident.

22. **Xantholinus vilis.**

Minor, nitidus; capite nigro; palpis, pedibus elytrisque testaceis, antennarum basi rufa; prothorace seriebus dorsalibus multipunctatis, capite utrinque sat crebre fortiter punctato; prosterno posterius carinato.
Long. 5 millim.

Hab. MEXICO (*Truqui*), Guanajuato, Cordova (*Sallé*), Jalapa (*Höge*); GUATEMALA, near the city, San Gerónimo, Torola, Capetillo, Panajachel (*Champion*).

This is yet another species very closely allied to *X. laxus*, but is smaller and narrower, and readily distinguished by the pallid elytra, which are picescent only at the extreme base. The antennæ are rather small and slender, the second joint rather longer than the third. The thorax is slightly narrowed behind; the usual number of punctures in the thoracic series is nine, but it varies from seven to eleven, it being usually the larger individuals that possess the smaller number. The prosternum is pallid; the punctuation of the elytra is scanty, but shows a distinct series along the middle.

A considerable series was obtained of this obscure insect; it is, indeed, probably one of the commoner Staphylinidæ of our region.

23. **Xantholinus salvini.**

Elongatus, angustus, depressus, pallide piceus; antennis pedibusque testaceis, his apicem versus latioribus, articulis secundo tertioque sat elongatis; prothorace seriebus dorsalibus 9–11-punctatis.
Long. 5–6 millim.

Hab. GUATEMALA (*Sallé*), near the city (*Salvin*), San Gerónimo (*Champion*).

This is similar to some of the varieties of *X. vilis*, but is a very distinct species, readily recognizable by the colour and structure of the antennæ, and by the prosternum being quite destitute of carination. The head is coarsely but not rugosely punctate on either side. The thorax is slender and elongate, distinctly narrowed behind; the dorsal series are irregular, and there are in addition about fifteen punctures on each side irregularly placed. The elytra are not longer than the thorax, are very shining, sparingly but somewhat coarsely punctate, without distinct discoidal series. The under surface is paler than the upper, nearly yellow.

Four examples: the one obtained by Mr. Salvin is larger and more elongate than the others, and has a greater amount of punctuation on the head, but I think is certainly the same species as the smaller examples.

24. **Xantholinus crassiceps.**

Parallelus, nitidus, piceus; capite nigro; elytris fusco-testaceis, antennarum basi, palpis pedibusque rufis capite oblongo, utrinque dense fortiterque rugoso-punctato, angulis posterioribus minute subdentatis; prothorace seriebus dorsalibus 4- vel 5-punctatis.
Long. 7 millim.

Hab. MEXICO, Guanajuato (*Sallé*), Oaxaca, Cerro de Plumas (*Höge*); GUATEMALA, Capetillo (*Champion*).

This species is closely allied to *X. attenuatus*, Er., but is rather larger and broader, and has a smaller number of punctures in the thoracic series; from all the allied species in our fauna it may be distinguished by the structure of the head, the space at the sides under and behind the eye being unusually broad, very densely rugose-punctate, and enclosed by two lines meeting behind, and forming at their junction a very minute angle visible only in a certain light; the lower of these lines extends the greater part of the length of the head, while the upper is very obsolete, and in fact only definite quite near the hind angle; the punctuation on the upper surface of the head is coarser and closer than usual, and the smooth space on the middle large; the colour of the elytra and hind body vary somewhat; the former are, however, yellow, more or less clouded with piceous, and the latter has the sides of the segments near the base pallid to a greater or less extent. The prosternum is finely carinate along the middle.

It is apparently rare, only seven examples having been procured, one of which is from Guatemala.

25. **Xantholinus æneotinctus.** (Tab. XII. fig. 23.)

Fuscus, supra æneus, nitidus; antennarum basi, pedibus palpisque rufis; capite subquadrato, versus latera fortiter punctato; prothorace parum punctato, seriebus dorsalibus irregularibus, circiter 8-punctatis; elytris quam thorax paulo brevioribus, parce fortiter punctatis, nitidis.
Long. 8 millim.

Hab. GUATEMALA, San Isidro 1600 feet, El Tumbador 2500 feet, Zapote (*Champion*); PANAMA, David, Bugaba (*Champion*).

Antennæ stout, thicker externally, second and third joints moderately long, the latter evidently the longer. Head very shining, broadly impunctate on the disc, with rather coarse, not close, punctures on the sides. Thorax evidently narrowed behind, shining brassy, the punctures of the discoidal series irregular, especially on the basal portion, owing to some supernumerary punctures near the hind angles, and in addition with six or eight larger punctures on each side. Elytra quadrate, infuscate yellow, strongly tinctured with brassy, with numerous rather distant definite punctures.

A series of about twenty examples was procured, exhibiting a little variation in the size and number of the punctures of the thoracic series and the distinctness of the brassy tint of the upper surface.

26. **Xantholinus guatemalenus.**

Fuscus; elytris fusco-testaceis, capite nigro; supra leviter æneo-tinctus, nitidus; capite fortiter minus crebre punctato, medio lævigato; prothorace seriebus dorsalibus 3-punctatis; elytris thoracis longitudine, parce subobsolete punctatis; antennis pedibusque testaceis.
Long. 8 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ stout; second and third joints elongate, the latter the longer. Head convex, oblong, slightly narrowed in front, its punctures large and distant. Thorax with only three punctures in the dorsal series; they are large and placed on the posterior two thirds; there are also four other large punctures on each side.

Though similar to *X. æneotinctus* this species can be readily distinguished by the thoracic punctuation; the head, too, is rather longer and narrower; only one example has been found.

27. **Xantholinus flagellifer.**

Rufescens, supra leviter æneo-tinctus; capite æneo, elytris infuscatis; antennis crassis; capite ovali, minus dense et fortiter punctato; prothorace seriebus dorsalibus obsoletis, tantum versus basin perstantibus ibidemque irregularibus; elytris crebre fortiter punctatis.
Long. 9 millim.

Hab. PANAMA, Bugaba 800 to 1500 feet (*Champion*).

Antennæ unusually stout, second and third joints rather long. Head very shining brassy, between the frontal grooves with an excessively minute punctuation; the disc impunctate, about the rounded hind angles and vertex with distant, not very coarse punctures. Thorax elongate, a little narrowed behind, very shining red, faintly tinctured with brassy, towards the base on each side of the middle with a group of punctures; these and two punctures near the front represent the discoidal series, and there are in addition a few quite irregularly placed punctures near the sides. The elytra are about as long as the thorax, infuscate red, more pallid at the base, a little tinted with brassy, rather coarsely punctate. Legs clear yellow-red.

Three examples.

28. **Xantholinus panamensis.**

Fusco-rufus, æneo-tinctus, nitidus; capite ovali, gracili, sat crebre fortiter punctato; prothorace seriebus dorsalibus circiter 8-punctatis, ad basin utrinque punctis adjectis nonnullis; elytris fortiter sat crebre punctatis, summa basi rufa.
Long. $8\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ stout; third joint elongate, much longer than the second; fourth joint slightly, tenth strongly, transverse. Head slender, narrowed in front, strongly rounded at the hind angles, very shining brassy, with rather numerous coarse punctures, which are absent from an irregular rather small space on the disc. Thorax elongate and rather slender, with a curved series of seven or eight punctures on each side in addition to the discoidal series, and a few supernumerary punctures at the base on each side. Legs clear red. Underside of head black, rather coarsely and closely punctate.

One example. The species has a good deal of resemblance in form to *Allotrichus arenarius*, but the palpi are quite different, the terminal joint being conical and rather short.

ALLOTRICHUS.

Corpus elongatum, angustum, minus depressum. Labrum bilobum. Palpi graciles, elongati, articulo ultimo elongato, latere interiore subcurvato; maxillares apice acuminato, labiales minute truncato. Prothorax angulis anterioribus nullis, linea marginali superiore versus angulos anteriores minus fortiter deflexa, pleura haud abbreviata, anterius angustata. Mesosternum breve, margine posteriore leviter curvato. Tarsi simplices.

This genus agrees with *Saurohypnus* in the form of the palpi, but in other respects is not allied to that genus; it is, indeed, nearer to *Xantholinus*, from which it differs by the longer terminal joint of the palpi, by the larger prosternum, and by the shape of the thoracic side-piece, which is not a parallel-sided narrow slip, but is broad, especially just behind the insertion of the coxæ; then, owing to the superior marginal line being more deflected at the front angle than it is in *Xantholinus*, becomes in front of the prosternum quite narrow. The longer of the thoracic tactile setæ is placed very near the front of the thorax, but is not very conspicuous, owing to the rather numerous other setæ existing along the side of the thorax, but (if I am right in considering this seta placed at the rounded anterior angle to be the tactile seta) is really remote from the marginal line. Thus I doubt whether the genus will really prove to be a close ally of *Xantholinus*, as on first consideration it appears to be.

A. arenarius, Mr. Champion informs me, was found on the sandy bank of a stream in the forest.

1. **Allotrichus arenarius.** (Tab. XII. fig. 24.)

Angustulus, niger; capite thorace elytrisque violaceis, nitidis; capite fortiter sat crebre punctato; prothorace elongato utrinque plaga longitudinali punctorum rarorum, inter has et latera parce punctato.

Long. 13 millim.

Hab. Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

Only two examples were met with.

Antennæ rather large, joints four to ten transverse. Head elongate, of a shining violaceous colour, with numerous coarse punctures, which are more distant along the middle; beneath rather more closely and finely punctate, shining. Thorax very

elongate, not at all narrowed behind, and only very slightly towards the front angles; with a broad smooth space along the middle, and on either side of this rather sparingly and irregularly punctate; between this irregular punctuation and the sides with a few punctures, and with numerous others at the lateral margin. Scutellum shining, with a few punctures. Elytra of a darker violet colour than the head and thorax, scarcely longer than the thorax, very finely and rather sparingly punctured.

HYMENEUS.

Corpus parum punctatum, politum. Mandibulæ inæquales, sinistra medio dentata, basi minus crassa, membrana libera aucta; labrum angustum, prominens, medio fere ad basin divisum. Palpi articulo ultimo elongato. Thorax elongatus oblongus, prosterno sat elongato, pleuris haud abbreviatis, lineis marginalibus haud conjunctis, superiore integro, versus angulos anteriores subtus sat deflexo. Caput trophique secundum sexum dissimiles.

This genus comes nearest to the *Eulissus* division of *Xantholinus*, from which it is well distinguished by the structure of the mandibles, the basal part of which is comparatively slender; the prosternum, too, is longer and narrower, and the peculiar structure of the head in the males is characteristic of the genus. The head of the male is much broader than in the other sex, and differently sculptured at the sides and beneath; the maxillary palpi are more elongate, the second joint being elongate and slender, not stouter than the following; the mandibles are more elongate and slender, and more unequal, the left having a large bifid tooth in the middle, which is absent on the right mandible, the inner margin of this latter being, however, more twisted and sinuate; the female has a bifid tooth on the middle of the left mandible, and a small tooth on the middle of the other one. The front tarsi are quite slender.

Hymeneus is no doubt peculiar to Tropical America; the species, I believe, are stercoraceous in their habits. *Xantholinus impressifrons*, Guer., and *X. temporalis* and *X. pygialis*, Sharp, belong to the genus.

1. **Hymeneus godmani.** (Tab. XIII. fig. 1.)

Nitidissimus, niger, capite thoraceque violaceo-cyaneis; elytris cyaneis, fere impunctatis, abdominis apice late rufo.
Long. 16 millim.

Hab. Costa Rica, Irazu 6000 to 7000 feet (*Rogers*); Panama, Volcan de Chiriqui up to 6000 feet, Bugaba (*Champion*).

Head evidently narrowed in front, very polished, behind the eye with a single puncture, the vertex with numerous coarse punctures; the hind angles rounded, not at all denticulate. Thorax oblong, narrower than the elytra, near the anterior angles with two large punctures, but with no other punctures, except those quite near the margins; a short, distinct channel at the base in the middle. Elytra rather longer than the thorax, only very obsoletely punctured, indeed the only punctuation that is evident

on them is a sutural and a discoidal series of rather obsolete but setigerous punctures; their colour is not so beautiful as that of the head and thorax. Hind body with the terminal segment and part of that preceding it bright red. In the male the head is much broader, and behind the eyes at the sides the surface is somewhat depressed and finely strigose so as to give it a silky opacity; the whole of the underside, except the proximity of the gular suture, is similarly strigose and opaque.

I have a series of eight examples of this brilliant insect before me; they vary in the extent of red colour at the extremity of the hind body; and the example from Costa Rica has the anterior parts of a greenish instead of a violaceous hue, but I do not see any grounds for treating them as more than one species. *Xantholinus erythropygus*, Chevr. MS., is an allied species. The example figured is a female taken on the Volcan de Chiriqui. Found in dung in the forests.

2. **Hymeneus splendens.**

Nitidissimus, niger; capite, thorace elytrisque læte cyaneis, abdominis segmento ultimo rufo; capite ad angulos posteriores denticulato.
Long. 16 millim.

Hab. NICARAGUA, Chontales (*Janson*).

I have seen only a single female of this species; and the only important characters by which it is distinguished from *H. godmani* are that the space between the frontal grooves is depressed behind, the hind angles of the head are denticulate, and the punctures on the vertex less numerous; probably the male will show more marked distinctions.

3. **Hymeneus divisus.**

Nitidissimus, niger; capite thoraceque violaceo-cyaneis; elytris cyaneis, fere impunctatis; capite ad angulos posteriores fortiter denticulato.
Long. 16 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Of this species also only a single female has been procured; it has the frontal grooves finely sculptured and opaque, and the posterior part of the space between them separated from the anterior; the hind body is entirely black; in other respects it agrees with *H. splendens*.

4. **Hymeneus cephalotes.** (Tab. XIII. fig. 2.)

Nigerrimus, nitidus; elytris elongatis, viridibus; abdominis apice rufo-testaceo.
Long. 20 millim.

Hab. NICARAGUA, Chontales (*Belt*).

This is a remarkable species, of which only a single male example has been obtained, and the description of the head of this sex will probably only partially apply to the

female. The head is broad, rather broader than the elytra, the anterior part is much advanced between the antennæ, and the frontal grooves are not sharply defined; the surface is very shining; there is a rather small puncture just behind the eye, and another in a line with it nearer the middle; there are several punctures about the vertex, and each side is compressed and flattened so as to form a large, flat space, which is dull and rugose, and limited above by a curved raised line; the underside is not dull, but is only finely punctate, and at the base of each mandible there is a large compressed projection. The thorax is oblong, and has on each side two punctures near the front angles, and a single puncture placed about the middle of the length at some distance from the margin. The elytra are only obsoletely and very sparingly punctate. The terminal segment is bright red-yellow.

5. **Hymeneus amethystinus.**

Nitidissimus, niger; capite thoraceque purpureis; elytris elongatis, cyaneis.
Long. 15 millim.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Flohr*).

This species differs only from *H. godmani* in the colour (the head and thorax being purple, and the hind body unicolorous), and by the head being rather more elongate; the sexual distinctions are similar in the two species.

I have seen a pair from Sallé's collection, and a male sent by Flohr; the latter is recorded as being found in dung.

6. **Hymeneus læticulus.**

Nitidissimus, niger; elytris cyaneis, abdominis segmentis duobus ultimis rufis; pedibus piceis.
Long. 11 millim.

Hab. Panama, Volcan de Chiriqui below 4000 feet (*Champion*).

This insect is well distinguished from *H. godmani* by the much smaller size and the black head and thorax; the head, too, is shorter in each sex. The sexual distinctions are almost the same as in the larger species, but in *H. læticulus* the strigosity of the sides and under surface is very much coarser.

Six examples (agreeing exactly except that in one the base of the penultimate segment is black) were obtained.

LEPTACINUS.

Leptacinus, Erichson, Käf. Mark. p. 429; Gen. et Spec. Staph. p. 333.

This is a genus of about thirty species, and has a wide distribution in both hemispheres; the two species here assigned to it differ a little from the typical forms in the structure of the palpi, the last joint of the maxillary palpus being, though slender, broader at the base, so that it is not linear; the difference, however, would not justify

the establishment of a separate genus at present, especially as these insects have the narrow prothoracic side-piece in common with the typical *Leptacini*.

1. **Leptacinus grandiceps.** (Tab. XIII. fig. 5.)

Minor, nitidus, piceus; antennis pedibusque testaceis; capite latiore, nigricante, crebre fortiter punctato; prothorace seriebus dorsalibus circiter 8-punctatis; elytris fere impunctatis.
Long. 4–5 millim.

Hab. GUATEMALA, Las Mercedes 3000 feet, El Tumbador 2500 feet, Coatepeque 1300 feet (*Champion*); PANAMA, San Feliz, Bugaba (*Champion*).

The size of the head is liable to some variation, but is always larger than it is in *Xantholinus laxus*, *X. vilis*, and the other small species of that genus. It is usually a good deal broader than the thorax or elytra, but is not round, for though the sides are rounded, they are also a good deal narrowed towards the front; the sides of the head are peculiarly formed; there exists a distinct genal space at the sides analogous to that I have described in *X. crassiceps*, but in the *L. grandiceps* the superior line is distinct, and the lower line is effaced; the underside of the head as well as this lateral space being opaque in marked contrast with the very polished upper surface. The second and third joints of the antennæ are short; and there is a carina on the prosternum, this part being usually yellow.

In the series of eight examples there is a little variation in the size of the head; the specimen figured is from Coatepeque.

2. **Leptacinus oscillans.**

Minor, nitidus, piceus; capite nigricante, elytris fusco-testaceis; capite sat lato; antennis, palpis pedibusque testaceis; prothorace seriebus dorsalibus 10-punctatis.
Long. 5 millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

This little insect will no doubt at first be considered by others, as it was by myself, as a variety of *Xantholinus laxus* or *X. vilis*, but it is really more nearly allied to *L. grandiceps*, as shown by the small terminal joint of the maxillary palpus and the structure of the head; this latter is larger than it is in either of the two species of *Xantholinus* mentioned, and less oblong, being more narrowed to the front; the genal space described in *L. grandiceps* exists also in this species, but is less distinct, the curved line limiting it being only distinct near the eye, and the punctuation in the space is not rugose, but is rather coarse, and has shining interstices, and the underside of the head is not opaque. The elytra are hardly so long as the thorax, and have a scanty punctuation. Only one example has been met with in each of the localities; though differing in some of the slighter details, they must at present be considered as one species; but I may mention that the exponent from Bugaba has the wing-cases evidently longer than they are in the typical example from Chontales.

LITHOCHARODES.

Lithocharodes, Sharp, Trans. Ent. Soc. Lond. 1876, p. 204.

This genus appears to be peculiar to the New World, where its species range from Mexico to Uruguay, the Central-American region being apparently their metropolis. Only one other species is known to me in addition to those here enumerated.

1. Lithocharodes spinigera.

Rufa, nitida; elytris dilute fuscis, pedibus testaceis; capite thoraceque sat crebre vix fortiter punctatis, linea mediali lævigata; elytris parce subtilius punctatis, prothoracis longitudine; capite subtus parce haud subtiliter punctato.
Long. 5–6 millim.

Hab. GUATEMALA, near the city (*Champion*).

The head is oblong, rather narrow; the thorax also is slender, and the superior marginal line of the thorax exists in front, though very fine. The male has the hind margin of the last ventral plate marked with a deep angular excision on either side, and projects in the middle as a very acuminate tooth; the last dorsal plate is broad at the extremity, and truncate, being just perceptibly sinuate on each side; in the female the hind margin of each of these plates is simply rounded.

A dozen examples have been found, showing very little variation; these were captured on the sandy banks of the small streams at the bottom of the deep ravines or "barrancas" on the outskirts of the city of Guatemala.

2. Lithocharodes armata.

Rufa, nitida; pedibus testaceis; capite thoraceque sat crebre fortiter punctatis, linea mediali lævigata; elytris parce subtilius punctatis, prothoracis longitudine; capite subtus parce fortiter punctato.
Long. 5 millim.

Hab. NICARAGUA, Granada (*Sallé*).

This species is very closely allied to *L. spinigera*, but the punctuation is a little coarser, and the male characters a little different; the central projection or tooth of the last ventral plate is very acute, but there is only a slight emargination on each side of it; on the other hand, the sinuation of the last dorsal plate is slightly more distinct, and its angles rather more prominent.

Only one example is present.

3. Lithocharodes simillima.

Rufa, nitida; pedibus testaceis; capite thoraceque linea mediali lævigata, fortiter, illo crebrius hoc sparsim, punctatis; elytris quam thorax brevioribus, parce punctatis; capite subtus parce fortiter punctato.
Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Cahabon (*Champion*).

This species is very similar to *L. armata*, but has the head more oblong and rather more punctate, and the elytra shorter. The unique individual found is, I have no doubt, a male, though the sexual characters are quite different from those of *L. armata*; the last dorsal plate is feebly emarginate in the middle, and the corresponding ventral plate broadly truncate.

4. **Lithocharodes germana.**

Rufa, nitida; capite superne fuscescente, pedibus testaceis; capite thoraceque crebre fortiter punctatis, linea mediali lævigata; elytris minus subtiliter punctatis, quam prothorax paulo brevioribus; capite subtus anterius sat fortiter punctato, posterius fere lævigato.
Long. 7 millim.

Hab. Guatemala (*Sallé*), San Gerónimo (*Champion*).

Rather larger and broader than *L. spinigera*, and with the punctuation of the upper surface more marked, and the broader head a little narrowed in front, but with totally different male characters; the last dorsal plate has its hind margin slightly thickened and sinuously emarginate, while the last ventral plate is broadly truncate and quite straight, with its outer angles just perceptibly projecting outwards, not backwards.

Only one example is before me from San Gerónimo; but I believe I am correct in considering the example from Sallé's collection as its female, although the head is quite pale.

5. **Lithocharodes flohri.**

Minus gracilis, rufa, nitida; capite thoraceque crebre fortiter punctatis, linea mediali lævigata, hoc anterius evidenter latiore; elytris quam thorax paulo brevioribus; capite subtus sat fortiter punctato, nitido.
Long. 7 millim.

Hab. Mexico, Uruapan (*Flohr*).

This is larger and broader than any of the other species, but the other distinctions from *L. spinigera* are small, and as the two examples before me are apparently both females, the validity of their specific distinction cannot be fully established.

6. **Lithocharodes fuscipennis.** (Tab. XIII. fig. 6.)

Lithocharodes fuscipennis, Sharp, Trans. Ent. Soc. Lond. 1876, p. 205[1].

Hab. Guatemala, near the city, Zapote, San Gerónimo, Paso Antonio (*Champion*).—South America, Amazons [1].

This is apparently a rare insect, only one example having been brought from each locality where it has been met with. I do not observe any marked sexual characters in the examples obtained. The specimen figured is from Paso Antonio.

7. **Lithocharodes fusciventris.**

Minus læte rufa, nitida; elytris abdomineque fuscis, illis apice pedibusque testaceis; capite thoraceque fortiter

sat crebre punctatis, linea mediali lævigata; elytris thoracis longitudine, fere impunctatis; capite subtus fortiter punctato, evidenterque setosello.
Long. $5\frac{1}{2}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

This species differs from *L. fuscipennis* in its rather smaller size, less vivid colour, and the more evident punctuation of the head and thorax. The unique individual is, I believe, a male, although there is nothing to indicate the sex, except that the terminal dorsal plate is quite truncate.

8. **Lithocharodes gracilis.**

Gracilis, nitida, rufa; elytris fuscis, apice testaceo, abdomine sæpius apicem versus plus minusve infuscato; capite thoraceque sat crebre et sat fortiter punctatis, linea mediali lævigata; elytris thoracis longitudine, parce obsoleteque punctatis; capite subtus tantum anterius fortiter punctato.
Long. $4\frac{1}{2}$ millim.

Hab. Nicaragua, Chinandega (*Sallé*); Panama, Tolé, Peña Blanca 3000 to 4000 feet, Bugaba (*Champion*).

Very closely allied to *L. fuscipennis*, but considerably smaller, not so brightly coloured, and with the punctuation less obsolete. I see no sexual distinctions. Seven individuals have been found; the one from Nicaragua is in bad preservation, and may possibly be another species.

9. **Lithocharodes sordida.**

Gracilis, nitida, rufo-picea; elytris dilute fuscis; capite thoraceque fortiter sat crebre punctatis, linea mediali lævigata; elytris thoracis longitudine, subtiliter punctatis; capite subtus parce fortiter punctato, nitido.
Long. 5 millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

One example, probably a female; the tubular aperture at the extremity of the last segment being small, and the hind margin of the ventral plate rounded, that of the dorsal plate truncate.

10. **Lithocharodes puncticeps.**

Gracilis, nitida; elytris fuscis, apice pedibusque testaceis, abdomine pectoreque fuscis; capite oblongo, anterius haud angustato, linea mediali lævigata minus discreta; thorace gracili, anterius latiore, fortiter sat crebre punctato; elytris thoracis longitudine, subtiliter punctatis; capite subtus crebre fortiter punctato.
Long. 5 millim.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*).

This and the three following species form a group distinguished by the greater punctuation of the head. I have seen only four examples of *L. puncticeps*, two of which are very fragmentary; in one sex, presumed to be the male, the last ventral plate is produced in the middle so as to form there a rather indistinct broad, somewhat rounded, angle; the corresponding dorsal plate is slightly emarginate in the middle.

11. **Lithocharodes fuscula.**

Gracilis, rufo-fusca; elytris fuscis, apice rufescente, antennis pedibusque testaceis; capite oblongo, anterius leviter angustato, crebrius punctato, linea mediali angusta lævigata; thorace gracili, anterius latiore, crebre fortiter punctato, linea mediali lævigata; elytris subtilius parce punctulatis, quam thorax haud longioribus; capite subtus crebre fortiter punctato.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*).

The six examples before me do not exhibit any sexual character. Found beneath dead leaves &c., on the sandy banks of streams.

12. **Lithocharodes rufula.**

Gracilis, rufa; pedibus testaceis, elytris disco subfuscescente, pedibus testaceis; capite oblongo, anterius angustato, crebrius punctato, linea mediali angusta lævigata; thorace gracili, anterius latiore, crebre fortiter punctato, linea mediali lævigata; elytris quam thorax paulo brevioribus, subtilius punctatis; capite subtus crebre fortiter punctato.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, Pantaleon, Rio Naranjo (*Champion*).

The three individuals do not exhibit any sexual characters. The species is distinguished from *L. fuscula* chiefly by the rufescent colour. Found on the sandy banks of streams.

13. **Lithocharodes collaris.**

Fusca; capite elytrisque nigris, thorace antennarumque basi rufis, pedibus testaceis; capite anterius angustato, densius fortiterque punctato, linea mediali lævigata, angusta; thorace crebrius fortiter punctato, linea mediali lævigata; elytris quam thorax haud longioribus, sat crebre minus subtiliter punctatis; capite subtus crebre fortius punctato.

Long. 6 millim.

Hab. GUATEMALA, Cubilguitz in Vera Paz 1000 feet (*Champion*).

The only example found has no peculiarity by which I can form an opinion as to its sex.

SOMOLEPTUS.

Statura minor, formâ gracilis. Caput elongatum, collo angusto. Palpi maxillares articulo ultimo tenue, lineari, basi quam articulus præcedens multo angustiore. Antennæ scapo magno; sulci antennarii intermedii obsoleti, laterales nulli. Thorax anterius angustus, pleuris haud abbreviatis. Coxæ intermediæ sat distantes. Tibiæ espinulosæ; tarsi omnes graciles.

This genus will include some small but graceful forms of Xantholinina allied to *Leptacinus*, but differing by the more elongate anterior portion of the thorax and its larger pleuræ, by the obsolete antennal furrows, and the slender legs destitute of spinules; the species have a peculiar facies by which they are readily recognized, and which depends, I think, chiefly on the shape of the thorax and the large scape of the antennæ. In these respects they agree with the eastern genus *Mitomorphus*, Kraatz,

but they differ from it in the structure of the terminal joint of the maxillary palpi, which in *Somoleptus* does not depart to any extent of importance from what obtains in *Leptacinus*. *Somoleptus* is probably peculiar to the tropical regions of the New World: and no doubt *Leptacinus clavicornis* and *L. subtilis*, Er., and possibly also *L. debilis*, Er., all of which are Colombian species, belong to it, Kraatz having erroneously referred them to *Mitomorphus* when he established that genus (Wiegm. Arch. xxv. p. 106). *L. nitidus*, Sharp, also is a *Somoleptus*.

1. **Somoleptus ænescens.** (Tab. XIII. fig. 8.)

Fuscus, supra ænescens, nitidus; antennarum basi rufa, pedibus testaceis; parce obsoletissime punctatus; capite oblongo; abdomine apicem versus latiore.
Long. 6 millim.

Hab. GUATEMALA, near the city, San Gerónimo, San Joaquin in Vera Paz (*Champion*).

Head longer than broad, only very sparingly punctate, shining brassy, subtruncate behind, the hind angles being rounded. Thorax elongate and narrow, slightly narrowed behind, like the head of a shining brassy colour, sparingly and only extremely finely punctured. Elytra scarcely so long as the thorax, very shining, almost impunctate. Hind body with the margins of the segments sordid testaceous. Colour beneath infuscate testaceous, the breast being darker, and the head brassy, very shining, and with only a few fine distant punctures. The terminal ventral plate is broadly emarginate; in one sex the segment of the armature is very large, and consists of two lobes separated by a very long fissure, while in the other sex this segment is terminated by a small circular orifice.

This species was found in plenty at San Gerónimo, and the examples exhibit only very slight variation. Found beneath dead leaves &c. on the sandy banks of streams.

2. **Somoleptus bicolor.**

Rufescens, nitidus; capite, elytris abdominisque apice nigricantibus, pedibus testaceis; capite suboblongo cumque thorace crebre subtiliter punctato, medio longitudinaliter lævigato.
Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo, Quezaltenango 7800 feet (*Champion*).

Head not very elongate, oblong, but slightly narrowed in front, and the hind angles a little rounded; the surface rather closely punctate and finely pubescent, with a smooth space along the middle. Thorax distinctly punctate and pubescent, the punctuation slightly more distant than that of the head; a broad space along the middle, smooth. Elytra scarcely so long as the thorax, very finely and sparingly punctate. Hind body very finely and rather closely punctate and pubescent, the two terminal segments blackish.

3. **Somoleptus gracilis.**

Angustus, rufescens, nitidus; capite, elytris abdominisque apice nigricantibus, pedibus testaceis; capite subob-longo, cumque thorace crebre subtiliter punctato, medio longitudinaliter lævigato.
Long. 5 millim.

Hab. MEXICO, Cordova (*Sallé*).

The unique example indicates a species very similar to *S. bicolor*, but of much narrower form, and smaller, so that I have little doubt it will prove distinct. The punctuation of the head beneath is moderately distant and rather coarse.

4. **Somoleptus parvulus.**

Rufescens, nitidus; elytris abdomineque apicem versus fuscis, pedibus testaceis; capite suboblongo, minus elongato, cumque thorace crebre subobsolete punctato, medio longitudinaliter lævigato.
Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*); PANAMA, Los Remedios, Tolé (*Champion*).

This is so much smaller than *S. bicolor* that it cannot fail to be distinguished, and it is of less elongate form, with more indistinct punctuation on the head and thorax. Found on the banks of streams.

5. **Somoleptus obscurus.**

Nigricans, nitidus; antennis pedibusque rufis; capite gracili, cumque thorace crebrius subtiliter punctato, medio longitudinaliter lævigato.
Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Peña Blanca 3000 to 4000 feet (*Champion*).

In this species the head is of more slender form, less truncate at the vertex than those previously described. The punctuation of the head and thorax, though fine, is quite distinct; the elytra are about as long as the thorax, sparingly and excessively finely punctate. The colour beneath is of an infuscate red, with the head and breast darker; the punctuation of the head is distant and excessively fine.

The only example found is in a rather decayed condition.

6. **Somoleptus obsoletus.**

Nigricans, nitidus; antennis pedibusque rufis; capite elongato, oblongo-ovali, cumque thorace crebre obsoletissime punctato, medio longitudinaliter lævigato.
Long. 4 millim.

Hab. GUATEMALA, near the city, Aceituno (*Champion*).

The head is elongate and narrow, not narrowed in front, but the sides rounded behind; the thorax is moderately elongate, and the punctuation of it and the head is as obsolete as in *S. œnescens*, though not so distant; the elytra are elongate, though

scarcely longer than the thorax, and their punctuation is excessively scanty and indistinct.

This species is distinguished from *S. obscurus* chiefly by the obsolete punctuation of the head and thorax.

7. **Somoleptus punctulatus.**

Fusco-rufus, nitidus; capite elytrisque obscurioribus, antennis pedibusque rufis; capite angusto, suboblongo, cumque thorace sat crebre minus subtiliter punctato.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, Aceituno (*Champion*).

The head is a little narrowed in front, rather abruptly truncate behind, and the punctures on it are more conspicuous than in the allied species; the thorax is not very elongate, and the elytra are slightly longer than it, and bear a distant fine punctuation.

One example only was met with in each of the localities.

8. **Somoleptus sparsus.**

Nigricans, nitidus; antennis pedibusque rufis; capite elongato, oblongo, parce obsoleteque punctato.
Long. 4 millim.

Hab. GUATEMALA, Chiacam in Vera Paz (*Champion*).

The head is not at all narrowed in front, and the eyes are rather prominent, the truncature of the vertex rather abrupt, the punctuation very scanty. The elytra are rather elongate.

The shape of its head will not permit me to consider the unique example of this insect to belong to *S. obsoletus*, which species it resembles in size and colour.

9. **Somoleptus pallipes.**

Niger, supra æneus, nitidus; antennis rufis, pedibus pallide flavis; capite oblongo-ovali; elytris ad basin dense subtiliter rugoso-punctatis; abdomine apicem versus latiore.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Head narrowed in front, much curved at the sides, and greatly rounded at the hind angles, very indistinctly punctulate, of a very shining brassy colour. Thorax very elongate, very obsoletely punctate. Elytra densely punctate at the base, so as to be there opaque, the punctuation becoming scanty at the apex; the base is clothed with a very fine pallid pubescence, and a similar pubescence exists also on the basal segments of the hind body.

This is a very graceful insect of slender form, reminding one of *Tachyusa* in the Aleocharina. Only one example has been obtained.

10. **Somoleptus elegans.**

Angustior, nigricans, subæneo-micans, nitidus; antennis pedibusque piceis; capite angusto, oblongo-ovali, sat fortiter punctato; elytris ad basin dense subtiliter rugoso-punctatis; abdomine apicem versus latiore.
Long. 5 millim.

Hab. Guatemala, Balheu (*Champion*).

Although allied to *S. pallipes* in appearance and in the punctuation of the wing-cases, this species is distinguished by some minor characters. The antennæ and legs are darker in colour, the head is rather less rounded at the sides and hind angles, and the punctuation is a little coarser, so that, although only a single example has been obtained, I believe it will prove to be a distinct species.

11. **Somoleptus alticola.**

Nigro-piceus, nitidus, tarsis dilutioribus; elytris quam thorax multo brevioribus, abdomine apicem versus latiore.
Long. 5 millim.

Hab. Guatemala, Totonicapam between 8500 and 10,500 feet (*Champion*).

Head oblong-oval, very shining, almost impunctate. Thorax elongate, almost elliptic in form, rather sparingly and indistinctly, but not minutely, punctured, with a broad space along the middle impunctate. Elytra much shorter than the thorax, narrower at the shoulders than at the apex, very indistinctly and sparingly punctulate, very shining. Hind body broad behind, narrower towards the base.

Only one example has been obtained of this very distinct species.

12. **Somoleptus agræformis.** (Tab. XIII. fig. 7.)

Angustior, gracilis, nitidus, rufescens; elytris abdomineque apicem versus fuscescentibus, pedibus pallide testaceis; capite ovali, vertice rotundato, cumque thorace obsolete punctulato.
Long. $4\frac{1}{2}$ millim.

Hab. Mexico (*Flohr*).

This species is readily distinguished by the form of the head, which is not at all truncate behind. The thorax is very elongate, appears straight at the sides till near the front, thence much narrowed forwards; like the head very indistinctly punctulate. Elytra parallel-sided, scarcely so long as the thorax, indistinctly punctulate.

The special locality of the two examples, for which we are indebted to Mr. Flohr has not been recorded.

THYREOCEPHALUS.

Thyreocephalus, Guérin, Rev. Zool. 1844, p. 10.

This genus should be accepted, as it cannot be united either with *Xantholinus* or *Scytalinus*; the peculiar form of the head and thorax, the remarkable mandibles, the widely separated antennæ, the wide labrum, the presence of both marginal lines of the

thorax, and the fact that these are nearly conjoined behind the prosternum, are sufficient to validate the genus. It is probably peculiar to Tropical America; though some of the Malasian and Papuan insects (*X. lorquini*, Fauv., *e. g.*) approach it closely, I think it more probable that they will form a distinct genus. The Amazonian *Linidius tenuipes* and *L. extremus*, Sharp, are also *Thyreocephali*. The genus is by no means homogeneous, and its study is a good deal complicated by the sexual differences being very considerable, and the insects themselves very rare.

1. **Thyreocephalus salvini.** (Tab. XIII. fig. 3.)

Nigerrimus; elytris cyaneis, nitidis, fortiter punctatis; capite magno, disco post sulcos frontales fortiter punctato.

Long. 18–20 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Head depressed, black and shining, coarsely punctured at the sides and vertex, and also with a similar coarse punctuation extending backwards behind the frontal grooves. Thorax very shining, straight at the sides, with rather numerous punctures near the front and side margins. Elytra shining blue, somewhat sparingly and irregularly, though coarsely, punctured. Under surface of the head with a few coarse, distant punctures.

In the male the head is broader, so as to attain twice the width of the thorax, and the vertex is more rounded, the interantennal space bearing the labrum is broader, as is also the labrum itself, and the mandibles are longer and more slender.

Two males and one female were secured; an example of the former sex is figured.

2. **Thyreocephalus subtilis.**

Nigerrimus; elytris nigro-cyaneis, subopacis, subtiliter punctatis; capite magno subtiliter punctato, ad latera et ad verticem punctis majoribus impressis.

Long. 17 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).—SOUTH AMERICA, Venezuela (*coll. Sharp*).

Only one example of this species has been obtained in our region; but I have a small series in my collection from Venezuela. *T. subtilis*, though closely allied to *T. salvini*, is easily recognizable by the different punctuation of the head and elytra. The examples exhibit sexual distinctions similar to those of *T. salvini*, the individual captured by Mr. Champion being a small male.

3. **Thyreocephalus lynceus.**

Xantholinus lynceus, Er. Gen. et Spec. p. 309[1].

Hab. NICARAGUA, Chontales (*Belt*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).—COLOMBIA, Bogota[1] (*coll. Sharp*).

An example taken by Mr. Belt differs a little from the two specimens found by

Mr. Champion, and these two are again slightly different from the small series of Colombian examples in my collection; the distinctions are merely of minor details, and there is no ground at present for regarding the examples as other than all exponents of one somewhat variable and rather widely distributed species.

4. **Thyreocephalus cyanipennis.**

Nigerrimus; elytris cyaneis, nitidis, parce fortiter punctatis; abdominis segmentis duobus ultimis rufo-testaceis; capite magno, disco post sulcos frontales fortiter punctato.
Long. 20 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species differs from *T. salvini* almost solely by the bright red termination of the hind body; the elytra are of rather darker colour and a little more sparingly punctate.

One example only has been met with; it is a well-developed male.

5. **Thyreocephalus unicolor.**

Nigerrimus, nitidus; capite magno, fortiter punctato; elytris parce, subseriatim, sat fortiter punctatis.
Long. 18 millim.

Hab. MEXICO, Jalapa (*Flohr*).

This is another species excessively closely allied to *T. salvini*, though readily distinguished by the black wing-cases. The head is a little more densely punctured above, so that the coarse punctures behind the frontal grooves are scarcely isolated from the other punctuation, and on the under surface the sides are rather finely punctate, while a broad space on the middle is impunctate. The insect, too, is apparently rather broader, and the thorax is a little narrowed behind; and it has an acute elevation, almost a carina, on the prosternum between the front coxæ.

This insect was discovered by Mr. Flohr in the flowers of a *Bromelia*. The three examples sent me, though much damaged, appear to agree entirely, except that one has the head rather narrower than the others, probably a sexual character.

6. **Thyreocephalus rufipennis.** (Tab. XIII. fig. 4.)

Nigerrimus, nitidus; elytris rufis, crebrius fortiusque punctatis; tarsis rufescentibus; capite majusculo, crebrius fortiusque punctato, sat nitido.
Long. 15–18 millim.

Hab. MEXICO, Oaxaca (*Höge*); GUATEMALA, San Gerónimo (*Champion*).

This and the following species are readily distinguished from *T. salvini* and its allies by the fact that the prosternum is acutely carinate behind, and the punctuation more evenly distributed over the upper surface of the head. In *T. rufipennis* the head is broader than the thorax, but not greatly so, and is not at all broader than long; its punctuation is so close that the interstices only occupy as much space as the punctures themselves: these are rather elongate and narrow, and are densest on the part between

the eyes. The thorax is slightly narrowed behind, and the elytra are not longer than it.

Herr Höge found three examples; as one of them has the head narrower than the others, I conclude I have both sexes before me. In Guatemala Mr. Champion met with only a single example, and though it has the punctuation on the head not quite so dense, it is not sufficiently different to be treated as distinct at present.

7. **Thyreocephalus puncticeps.**

Nigerrimus, nitidus; elytris rufis, crebrius fortiusque punctatis; pedibus piceis, tarsis rufescentibus; capite oblongo-ovali, densissime fortiter punctato, opaco.
Long. 17–20 millim.

Hab. Mexico, Uruapan (*Flohr*), Juquila (*Sallé*).

This species is closely allied to *T. rufipennis*, but has the head very densely punctured and rather narrower, and the punctures of the elytra rather more numerous, especially near the suture.

Only one example is extant from each locality. That from Sallé's collection has the punctuation of the head a little less dense; but I feel sure the two belong to one species. They may be the sexes; if so, the differences of punctuation may be sexual; or they may both be females, as the mandibles are shorter and thicker than they are in the male of any other species of the genus.

8. **Thyreocephalus cribripennis.**

Nigerrimus; elytris pedibusque piceis, illis crebrius fortius profundeque punctatis; capite oblongo-ovali, parce fortiter punctato.
Long. 20 millim.

Hab. Mexico, Cordova (*Sallé*).

This insect is similar to *T. rufipennis*, but has the elytra darker in colour and with a larger development of punctuation. The head is quite sparingly punctate, so that it is shining like the thorax; the punctures at the sides of the latter are very coarse.

Only one example has been received; to judge from it the species is well distinguished from its allies by the fact that, in addition to the trivial characters, the labrum is less transverse and more prominent, its central notch being much larger, and it is nearly simply bilobed, the lateral angles (which are so evident in the other species) being in *T. cribripennis* not distinguishable. The sex of this individual is unknown to me.

SAUROHYPNUS.

Labrum rugosum, quadrilobatum. Caput inter antennas processu lato conspicuo. Palpi elongati, articulo terminali elongato, latere interiore curvato apice acuminato; mandibulæ sat elongatæ. Prothorax linea superiore subtili, subtus valde deflexa. Mesosternum breve, leviter rotundatum. Tarsi simplices.

The insect on which this genus is founded resembles the European *Nudobius lentus*

in form, but is distinguished by several characters from *Nudobius*, near which it should be placed. The prothoracic pleura is very short, owing to the early deflection of the superior line; this is continued on the under surface as far as the neck, while the inferior line ceases behind the prosternum, being for some considerable distance on the anterior part of its course extremely approximate to the superior line. The genus in appearance is most similar to the European *Gauropterus*, from which it differs by the comparatively wide separation of the antennæ and the correlative development of the labrum, which is furnished on each side with a well-marked, angular, corneous projection, as also by the larger development of the terminal joint of the maxillary palpi.

1. **Saurohypnus scutellaris.**

Elongatus, angustulus, minus depressus, niger; elytris rufis; pedibus, palpis antennisque piceis, illis articulo basali nigro; prothorace elongato, ad latera sat crebre punctato; capite quam thorax paulo latiore, crebrius fortiter punctato, nitido; elytris fortiter profundeque punctatis.

Long. 12 millim.

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

Scape of antennæ elongate; third joint a good deal longer than the second. Head oblong, with numerous coarse punctures, but quite shining. Thorax a good deal narrowed towards the base, the front angles rather prominent, very shining black, near the sides with some deep irregularly placed punctures, without trace of discoidal series. Scutellum with five or six very large punctures. Elytra as long as the thorax, with numerous deep distinct punctures. Legs piceous; tarsi red.

NUDOBIUS.

Nudobius, C. J. Thomson, Sk. Col. ii. p. 188; Rey, Col. Fr. Xantholin. p. 83.

This is a perfectly valid genus, though rejected by Fauvel, and consists of two or three species found in Europe, North America, and Japan. The European *N. lentus* lives under the bark of dead trees, and this is probably the case with the species found in our region.

1. **Nudobius celatus.** (Tab. XII. fig. 25.)

Angustulus, parallelus, elongatus, niger, nitidus; antennis pedibusque fusco-rufis, capite parce sat fortiter punctato; prothorace seriebus dorsalibus subtiliter 7-punctatis, lateribus parum punctatis.

Long. 8 millim.

Hab. Mexico (*Truqui*, *Flohr*), San Andres (*Sallé*), Oaxaca (*Höge*); Guatemala, Balheu (*Champion*).

This species, though bearing a great resemblance in appearance to the small black *Xantholini* (such as *X. fumatus* and *X. resectus*), may be, independently of the generic characters, distinguished from them by the existence of an extremely minute distant punctuation on the surface of the head and thorax. The coarse punctures on

the head are absent from the middle; the thorax is distinctly narrowed behind, is elongate, and, in addition to the dorsal series, has about six other fine punctures placed in a curved series at the side. The elytra are as long as the thorax, rather coarsely, moderately closely punctured, shining. The underside of the head is more closely and regularly punctate than the upper.

From the various sources nine examples have been procured. The one figured was found under pine bark at Balheu.

METOPONCUS.

Metoponcus, Kraatz, Nat. Ins. Deutsch. ii. p. 93; Rey, Col. Fr. Xantholin. p. 93.

This is a genus of wide distribution, though comprising at present not more than twenty species, several of which are Oceanic and Australian, and two or three South-American. In *Metoponcus* the reduction in size of the prothoracic pleura becomes extreme, though at first sight the contrary appears to be the case, owing to the inflexed portion of the pronotum being very large, and to the fact that this latter part develops at the outside in front a more or less indistinct margin simulating the true margin, and occupying a similar position in the shape of the insect.

§ 1. *Capite subtus utrinque marginato et canaliculato.*

1. **Metoponcus filarius.**

Leptacinus filarius, Er. Gen. et Spec. p. 334[1].

Hab. Guatemala, San Gerónimo, San Joaquin, Las Mercedes, Tamahu, Zapote (*Champion*); Nicaragua, Chontales (*Janson*), Granada (*Sallé*).—South America, Colombia [1], Amazons valley (*Bates*).

2. **Metoponcus guatemalensis.**

Minor, angustior, piceus, nitidus, sublævigatus; elytris pedibusque sordide testaceis, antennis rufis.
Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

This species is extremely closely allied to *M. filarius*, but is much smaller and narrower, with narrower and more elongate head and shorter and broader antennæ. Possibly the pallid colour may not be a constant character, as only two examples have been found, and they differ slightly in this respect.

3. **Metoponcus cingulatus.**

Angustus, elongatus, nitidus, piceo-niger; pedibus flavis, antennis rufis; abdominis basi pallide testacea, apice piceo-testaceo.
Long. 7 millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

The only example obtained of this species is almost exactly similar to *M. filarius*, except for the definitely pallid base of the hind body. It is also, however, rather more slender than *M. filarius*, has the elytra a little shorter, and not quite so smooth.

§ 2. *Capite subtus plano.*

4. **Metoponcus longiceps.** (Tab. XIII. fig. 10.)

Angustior, elongatus, subcylindricus, nigerrimus, nitidus, fere lævigatus; capite inter antennas compresso-spinoso; antennis latiusculis, brevibus, picescentibus.
Long. 5–6 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Head very long and narrow, longer than the thorax; the antennæ very approximate, and the front between them compressed and produced so as to form a sort of short horn or spine. Thorax elongate and narrow, straight at the sides, very shining black, with about three very fine punctures on each side of the middle, representing the longitudinal series, and about three others, equally fine, on each side. Elytra polished, about as long as the thorax. Underside of the head without any trace of margin or lateral channel, polished and impunctate.

Two examples were found of this remarkable little insect, the one figured being that found on the Volcan de Chiriqui.

5. **Metoponcus varians.** (Tab. XIII. fig. 9.)

Niger, nitidus; pedibus rufis, antennis piceo-rufis; capite punctis impressis; prothorace seriebus dorsalibus subtiliter 5-punctatis.
Long. $5\frac{1}{2}$–10 millim.

Hab. MEXICO (*Truqui*), Cordova (*Höge*); GUATEMALA, Volcan de Fuego 6400 feet (*Salvin*), Capetillo, San Gerónimo, Cerro Zunil, Quiche Mountains 7000 to 9000 feet, Totonicapam 8500 to 10,500 feet (*Champion*).

Head closely and excessively finely strigose, so that its lustre is a little dulled, bearing a few irregularly placed rather large punctures. Thorax narrowed behind, a good deal sinuate at the sides in the middle, like the head finely strigose, and on each side of the middle with a series of five or six distant small punctures, and with one or two still smaller punctures outside these. Elytra as long as the thorax, minutely punctulate and setulose.

If I am right in considering the specimens from the above localities as all one species, *Metoponcus varians* is very variable in size; the smaller examples resemble almost exactly *M. filarius*, and were probably found in company therewith, Mr. Champion having mounted the two on one card; *M. varians* is, however, readily identified by the absence of any trace of channel at the side of the head beneath, and by the prothoracic dorsal punctures. Mr. Champion found a good series of the present

species at Totonicapam under pine-bark, and five specimens on the Quiche Mountains; but the other localities have only yielded unique examples, some of which differ a good deal from the type.

The specimen represented on our Plate was found at Cerro Zunil.

6. **Metoponcus sinuatus.**

Elongatus, subdepressus, nitidus, piceus; capite, thorace elytrisque nigricantibus; sublævigatus, capite minute sparsim punctato, punctis majoribus impressis paucis; prothorace ad latera fortius sinuato.
Long. 10 millim.

Hab. Mexico, Patzcuaro (*Flohr*).

This species is allied to *M. varians*, but is distinguished by numerous minor details. The head and thorax are not strigose, but have a distinct distant minute punctuation; the former has also a few larger punctures, the eyes being small. The thorax is narrowed behind, and on each side about the middle has a sinuation or impression deeper than in the other species; two or three small punctures on each side of the middle represent the dorsal series. The elytra are shining, about as long as the thorax, finely punctulate. The front tibiæ are much dilated at the extremity.

7. **Metoponcus holisoides.** (Tab. XIII. fig. 11.)

Metoponcus holisoides, Sharp, Trans. Ent. Soc. Lond. 1876, p. 206 [1].

Hab. Guatemala, Zapote, Torola, Chacoj (*Champion*).—South America, Amazons valley [1].

One example only was found in each locality. The figure on our Plate is taken from the specimen brought from Torola.

8. **Metoponcus minutus.**

Testaceus, nitidus; capite fuscescente; hoc oblongo, cumque thorace parce subtiliter punctato.
Long. $2\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ clear yellow; scape short, second joint somewhat elongate, twice or three times as long as the minute third joint; penultimate joints very short, strongly transverse. Head abruptly truncated behind, only very slightly narrowed in front, very shining, with a few fine distant punctures. Thorax straight at the sides, scarcely narrowed behind, at the sides very sparingly and finely punctate. Elytra as long as the thorax, shining, very minutely punctulate and pubescent. Hind body with the apex yellow, the base slightly infuscate.

Only one example has been found. It is somewhat doubtful whether the species will prove to be really a *Metoponcus*; but I can see no reason for excluding it at present. It is the smallest member of the Xantholinidæ I am acquainted with.

Subfam. *PÆDERINÆ.*

Group **LATHROBIINA.**

CRYPTOBIUM.

Cryptobium, Mannerheim, Brach. p. 30; Er. Gen. et Spec. Staph. p. 561.
Homæotarsus, Hochuth, Bull. Mosc. 1851, p. 34.

This genus, originally established for a single European species, comprises at present about one hundred species, and is found in most parts of the world. The species in the New World are evidently especially numerous, and present a most difficult study to the coleopterist, the sexual characters being peculiar and subject to a complex variation that may be described as quite analogous with the phenomena that exist in the cornute Lamellicornia. Thus males of certain species have a produced lobe, sometimes of enormous size, on the middle of the hind body beneath, and also some pubescent and setigerous spaces; but in certain examples of the same species and sex the lobe may be entirely absent, and the pubescent or setigerous spaces much reduced, and, I am inclined to think, occasionally, like the ventral lobe, entirely absent; this latter varies in form according to the species, and may be a long slender spine, or a very broad plate, sometimes cleft nearly to the base. The females of certain species apparently have setigerous spots similar to those of the male; but this is rare, and requires verification by dissection—the rule, at any rate, being that both setigerous spaces and the ventral lobe are absent in this sex; and I think it possible that the supposed females with setigerous spaces may prove to be incompletely developed males.

I find the best character for dividing the genus consists in the presence or absence of a raised line on the outside of the wing-case parallel with the lateral margin. This does not exist in the original species of the genus, but is present in the majority of those in our fauna, and will ultimately prove, I think, of generic importance. In the Central-American region the species of this section are very homogeneous in structure, the labrum being destitute of denticles, the lower tooth of the mandibles divided, and the pro- and mesosterna strongly carinate. The species of section 2 are much less homogeneous; *C. rostratum,* very aberrant for our fauna, approaching rather closely in structure to the European *C. fracticorne,* while in other species the labrum is not denticulate in the middle; the mandibles may be either simply bidentate (*C. rostratum* and others) or with the lower tooth bifid (*C. nigriventre,* &c.)—the species near to *C. inquisitor* being closely allied, but differing *inter se* in this respect, prevent its being utilized as a subsectional character.

The structure of the terminal joints of the maxillary palpi is of subordinate value to some of the other characters I have alluded to, and cannot therefore be used for

validating the generic division into *Cryptobium* and *Homœotarsus* as proposed by Hochuth.

Mr. Champion informs me that most of the species met with by him were found on the sandy banks of rivers and streams, beneath stones or decaying leaves; some were captured in dark places in the forests, others in the more open country; they were chiefly obtained during the dry season, at which period the streams dry up a good deal.

§ 1. *Elytra with a raised lateral line parallel with the side margin.*

1. **Cryptobium collare.** (Tab. XIII. fig. 12.)

? *Cryptobium ruficolle,* Solsky, Hor. Soc. Ross. v. p. 142[1].

Sat latum, fusco-rufum; capite elytrisque nigris; antennis pedibusque testaceis, thorace rufo; capite elytris paulo latiore, opaco, crebre sat fortiter punctato; thorace crebre fortiter punctato, medio late impunctato; elytris thorace longioribus, crebrius fortiter punctatis, subnitidis.

Long. 13 millim.

Hab. Mexico[1] (*Truqui*), Oaxaca (*Höge*), Yantepec, Morelos (*Flohr, coll. Sharp*), Cordova (*Sallé*); Guatemala (*Sallé*), near the city, San Gerónimo, Tocoy, Rio Naranjo 450 feet (*Champion*); Nicaragua, Chinandega (*Sallé*); Panama, Bugaba, San Feliz (*Champion*).

Antennæ with the scape rather short, third joint scarcely half as long again as the second. Head dull, its punctuation not dense nor deep, the punctures near the front larger and more distant, a broad space behind the labrum impunctate; eyes placed near the base of mandibles; neck broad. Thorax broad, but subcylindric, red, shining, a little longer than broad, rather coarsely and moderately closely punctate, with a broad space along the middle smooth. Elytra quite one and a half times as long as the thorax, their punctuation deep, coarse, and dense. Hind body rather broad, infuscate red, with the apex paler, moderately closely and distinctly punctate.

In the male the fourth ventral plate is furnished behind with a long lobe reaching quite as far as the extremity of the next segment; it is broad, but narrower behind, and fringed with numerous very long hairs; at the base of the fourth segment there is a small transverse setigerous impression, and on the middle of the preceding segment an elongate transverse line bearing a series of erect setæ.

In the female each of the third and fourth segments bears a circular fovea. In some examples of the male sex the ventral lobe is entirely absent, and I have found one example of this imperfect form in which also the setigerous impressions are much reduced in size.

This species was met with plentifully both in Mexico by Herr Höge, and in Guatemala by Mr. Champion, but from the State of Panama only five individuals have been brought back. The Mexican examples exhibit but little variation from the description given above. The examples from Guatemala are usually rather smaller, and frequently

have the thorax and the tibiæ and tarsi darker in colour, and the abdominal lobe of the male rather more slender, and the setigerous impressions on the third and fourth segments rather less extensive. The examples from the State of Panama are all very aberrant. There are two males and one female from Bugaba; all are of small size, and the males have no trace of the abdominal lobe; the setigerous impression of the third segment is not extensive, and that on the fourth segment assumes the form of a rather small elliptical space: the two examples from San Feliz are males, and have the hind body pale, which is probably the result of immaturity, and the sexual characters similar to the Bugaba examples, except that the setigerous impressions are of rather larger size. I cannot look on these differences as specific; whether they are examples of local or endemic sexual variation remains to be tested by examination of a larger number of specimens.

Solsky has merely recorded the supposed occurrence of *C. ruficolle*, Motsch., in our region; but I feel sure the determination was erroneous, and that the true *C. ruficolle* does not occur in Mexico; and I also suppose it not improbable that *C. collare* was the species Solsky alluded to.

We have figured a well-developed male from Oaxaca.

2. **Cryptobium umbratum.**

Sat latum, nigricans; antennis pedibusque piceis, femoribus rufis; capite sat elongato, quam elytra vix latiore, crebrius fortiter punctato; prothorace crebrius fortiter punctato, medio longitudinaliter lævigato; elytris quam thorax paulo longioribus, crebrius fortiter punctatis; abdomine subtiliter punctato.
Long. 12 millim.

Hab. GUATEMALA, near the city, San Joaquin, and Balheu in Vera Paz (*Champion*).

This species is very closely allied to *C. collare*, but differs as follows:—it is of more slender form and of darker colour, the head is rather more deeply punctate, and not so dull, the elytra are a little shorter and not quite so densely punctate, and the hind body is rather more closely and finely punctate, and the sexual characters are different; in the male the fourth ventral segment bears a very broad lobe, which does not get narrower behind; its margins are fringed with very long hair, the hind margin being rounded; at the base of the same segment there is a large circular setigerous fovea, and on the preceding segment a transverse setigerous line. In the female there are no abdominal foveæ. The male characters vary greatly in their development; the description above gives them as seen in well-developed examples, but in some cases the lobe is reduced to a quite short, broad projection, and the setigerous impressions to mere punctiform foveæ.

A good series was obtained of this species. Specimens of this and other species of the genus were captured by Mr. Champion on the sandy banks of small streams at the bottoms of the very deep ravines or "barrancas" near the city of Guatemala.

3. **Cryptobium salvini.**

Elongatum, nigrum, nitidum; antennis tarsisque rufis, illarum articulo basali piceo; capite dense fortiter punctato, anterius nitido et impunctato; prothorace crebrius fortiter punctato, medio longitudinaliter lævigato; elytris quam thorax longioribus crebrius fortiusque punctatis; abdomine parce punctato.
Long. 13 millim.

Hab. Guatemala, Chinautla 4100 feet (*Salvin*).

So far as I can judge from a single female, this is a species allied to *C. umbratum* and *C. collare*, but with numerous points of distinction. The black colour, the narrower form, the more coarsely punctate head, shining in front, cannot fail to distinguish it from *C. collare*; while from *C. umbratum* the sparse punctuation of the hind body renders it quite distinct. The example is destitute of positive sexual marks.

4. **Cryptobium grandiceps.**

Latum, subdepressum, nigrum; antennis pedibusque rufis; capite majore, dense fortiter punctato, opaco; thorace parum elongato, cylindrico, crebrius fortiter punctato, medio longitudinaliter lævigato; elytris quam thorax evidenter longioribus, dense fortiter subrugulose punctatis, parum nitidis; abdomine lato, dense punctato.
Long. 16 millim.

Hab. Guatemala, Tamahu (*Champion*).

Of this species, an ally of *C. collare*, a single example only of doubtful sex has been found. It has a large head, with elongate mandibles, and will be readily recognized by its more densely punctate surface; the fourth ventral plate has on the middle a nearly circular setigerous impression, and the preceding segment a long transverse line, with elongate, erect setæ springing from it.

5. **Cryptobium cephalotes.**

Cryptobium cephalotes, Solsky, Hor. Soc. Ross. v. p. 141[1].

Hab. Mexico [1], Oaxaca (*Höge*).

I have seen only a single example that agrees at all well with Solsky's description, and am not quite sure that the determination is correct even in this case. Two other examples differ in that the under surface and hind body are in one picescent, in the other nearly black. But I am of opinion that all are examples of one species variable in colour. Solsky has only defined the sexual characters imperfectly; the male has, in addition to the lobe of the fourth segment, a large patch of very fine punctuation and pubescence, and a rather large transverse setigerous impression on the preceding segment. The female has a rather small curved depression, open behind, on the third segment.

6. **Cryptobium stipes.**

Subdepressum, parum latum, nigrum; antennis rufo-obscuris, pedibus testaceis; capite elongato, oblongo, opaco, densius fortiterque punctato; prothorace cylindrico, nitido, dense fortiterque punctato, medio linea haud

lata lævigata; elytris quam prothorax bene longioribus, densius, profunde, sat fortiter punctatis, subnitidis; abdomine sat crebre punctato.
Long. 14 millim.

Hab. Mexico, Oaxaca (*Höge*).

The head is elongate, and about as broad as the elytra, and the antennæ are long and slender, with the third joint not quite twice as long as the second. The male has a rather long and rather narrow lobe on the fourth ventral segment, furnished with long pubescence, and at its base an indefinite, rather small space covered with very fine punctuation and pubescence; on the preceding segment is a rather short transverse setigerous depression.

The male characters and the general appearance bring this species near to *C. cephalotes*, but it is well distinguished by the opaque head, longer elytra, and more numerous punctuation. Only one example has been found.

7. **Cryptobium longipenne.**

Cryptobium longipenne, Er. Gen. et Spec. Staph. p. 565 [1].

Hab. Mexico [1], Cordova (*Sallé*).

This is apparently a rare species, as I have before me altogether only six examples all from old collections. The sexual characters were not described by Erichson; in the male there is a short setigerous space on the third ventral plate, and a circular fovea bearing a small tuft on the next segment; this segment, moreover, is produced so as to form a very long, narrow, convex lobe, not narrowed towards the extremity, which is somewhat rounded. The small series of examples appear to me to indicate two forms, which may possibly be distinct species—(1) a larger one, in which the female has setigerous areas on the hind body almost as I have described in the male, but no ventral lobe—to this form belong the two exponents from Sallé's collection; and (2) a smaller form with rather shorter elytra, in which the male has characters similar to those of the larger form, but the female has no positive sexual marks.

8. **Cryptobium adversum.**

Subdepressum, nigrum; antennis piceis, pedibus testaceis, coxis fuscis; capite oblongo-subquadrato, crebre fortius punctato, subopaco; prothorace cylindrico, crebrius fortiter punctato, medio linea lata impunctata; elytris quam prothorax fere sesqui longioribus, dense, fortiter profundeque punctatis, subnitidis; abdomine minus dense punctato.
Long. 11 millim.

Hab. Mexico, Jalapa, Oaxaca (*Höge*).

This species is very closely allied to *C. cephalotes*, but is much smaller, of more slender form, with less elongate antennæ, and narrower thorax. It is almost equally similar to the smaller forms of *C. longipenne*, but has a less densely punctate head, this, moreover, being of slightly different form (slightly dilated in place of slightly narrowed

behind the eyes), rather shorter thorax, and rather shorter and more coarsely punctate elytra. The male has a short transverse space in which are implanted two pencils of setæ, on the third ventral plate, and on the fourth a scarcely perceptible, pubescent fovea; this segment, moreover, is produced so as to form a very broad lobe projecting as far back as the hind margin of the next segment, and having a quite rounded extremity. The female I have not seen.

I have preserved the name with which this insect was labelled in Höge's collections; he found six examples, and these are all I have seen.

9. **Cryptobium speculator.** (Tab. XIII. fig. 13.)

Gracile, elongatum, subdepressum, dilute rufo-obscurum; capite elytrisque fuscescentibus, pedibus testaceis, thorace rufo, nitido; hoc subobsolete sed fortiter, minus crebre, irregulariter punctato, medio longitudinaliter late lævigato; elytris elongatis, dense sat fortiter subrugulose punctatis, fere opacis.
Long. 13 millim.

Hab. Mexico, Oaxaca (*Höge*).

Antennæ slender and elongate, third joint nearly twice as long as the second. Head elongate, pilose, dull, but not entirely opaque, rather closely and definitely, moderately coarsely punctate, the punctuation absent from the anterior part. Thorax slender, almost cylindric, quite straight-sided, shining, red, with somewhat coarse, but not deep, rather scanty punctuation, a rather broad space along the middle impunctate. Elytra flat, elongate. Hind body slender, rather closely and finely punctate. Legs slender.

In the male the fourth segment beneath is furnished with a broad, short, pubescent lobe, and in the middle with a circular setigerous impression, the preceding segment having just before the hind margin a very short transverse setigerous line; in the female these two segments each bear a setigerous pore. Our figure represents the female.

10. **Cryptobium palustre.**

Parum latum, subdepressum, ferrugineum, pedibus testaceis; capite oblongo, crebrius fortiter punctato, anterius nitido; thorace cylindrico, crebre fortiter punctato, medio longitudinaliter late lævigato; elytris quam thorax paulo longioribus, crebrius fortiter, profundeque punctatis, subnitidis; abdomine parce punctato.
Long. 14 millim.

Hab. Mexico, Guanajuato (*Sallé*).

In the male of this species the fourth segment is furnished on the ventral aspect with a broad, moderately long, lobe, having straight sides and a very rounded extremity, and furnished with very long setæ; at the base of this lobe there is a small transverse setigerous depression, and at the base of the preceding segment a quite small impression bearing a fine pencil of setæ. The female has a linear transverse impression on the fourth segment; it is, however, quite fine, and may easily be overlooked.

Though a close ally of *C. collare*, this species is readily distinguished by the colour and the narrower form, as well as by the differences of sculpture expressed in the diagnosis. It was labelled "*C. palustre*, E. Dugès," in Sallé's collection, and I have preserved this name.

11. **Cryptobium ferrugineum.**

Subdepressum, sat latum, ferrugineum ; pedibus testaceis ; capite opaco, suboblongo, sat crebre, minus profunde punctato ; prothorace minus crebre punctato, medio late longitudinaliter lævigato ; elytris sat fortiter, dense, profunde punctatis, subrugosis.
Long. 12 millim.

Hab. MEXICO, Oaxaca (*Höge*).

Though very similar at first sight to *C. palustre*, this species has much denser punctuation on the elytra, and on the head a more distant and obsolete punctuation, and it has also a shorter thorax. The male has an elongate setigerous line on the third ventral plate, and on the next segment a transverse area bearing some delicate pubescence ; this segment, too, is produced behind so as to form a long, somewhat narrow lobe. The female has no positive sexual marks. I have seen only one pair of the species.

12. **Cryptobium luridum.**

Subdepressum, sat latum, ferrugineum, opacum ; thorace nitido ; capite subquadrato, peropaco, crebre, minus fortiter, haud profunde punctato ; thorace crebrius punctato, medio minus late longitudinaliter lævigato ; elytris dense, ad basin sat fortiter, ad apicem obsolete, punctatis, subrugosis, vix nitidis.
Long. 12 millim.

Hab. MEXICO, Oaxaca (*Höge*), Yantepec, Morelos (*Flohr, coll. Sharp*).

This is a species with large eyes and slender antennæ ; the head is quite dull, and its punctuation rather fine. The thoracic punctuation is scanty at the base ; that of the hind body is quite sparing. From *C. palustre* and *C. ferrugineum* the species is readily distinguished by the more quadrate head, and by the much finer punctuation on the apical portion of the elytra. The male has a short space on the third ventral plate giving out two pencils of setæ, a rather small circular setigerous fovea on the next segment, and the hind margin of this latter produced to form an extremely broad, rather short, lobe ; the female has no positive sexual marks.

13. **Cryptobium terminatum.**

Sat latum, rufum ; pedibus flavis, abdominis segmentis duobus ultimis nigris ; capite, thorace elytrisque crebre fortiter punctatis.
Long. $12\frac{1}{2}$ millim.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

Head scarcely so broad as the elytra, closely and coarsely punctate, shining in front, and there more sparingly punctate. Thorax a good deal narrower than the elytra, closely,

coarsely, and regularly punctate, a rather narrow distinct space along the middle smooth. Elytra flat, a little longer and much broader than the thorax, coarsely and very densely punctured, a little shining. Hind body finely and moderately closely punctate, slightly shining.

The unique example is no doubt a female, as there are no positive sexual marks.

14. **Cryptobium rubeculum.**

Parum latum, ferrugineum; pedibus testaceis; capite suboblongo, opaco, dense subobsolete punctato; prothorace elongato, crebrius punctato, medio longitudinaliter sat late lævigato; elytris quam prothorax paullo longioribus, dense, minus fortiter et profunde punctatis, subrugosis, haud nitidis.

Long. 11 millim.

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

This is a more slender insect than *C. luridum*, with a narrower head, which, moreover, is not so dull in colour; in shape it comes much nearer to *C. terminatum*, from which it is readily distinguished by the unicolorous hind body. The antennæ are elongate; the punctuation of the head, though coarse, is indefinite and not deep, but on the middle between the eyes it is distant and finer, and the surface there is not quite dull. The thorax is not greatly narrower than the head and elytra, and only a little shorter than the latter; the punctuation of the hind body is scanty and indistinct. The male has a short setigerous space on the third ventral plate, and a small circular fovea on the following segment; this segment, moreover, is produced behind to form an extremely broad, rather short, lobe. The female is without positive sexual marks.

Three examples are before me.

15. **Cryptobium æquale.** (Tab. XIII. fig. 15.)

Angustulum, subcylindricum, nitidum, rufulum; abdomine elytrisque plaga magna discoidali nigricantibus, antennis pedibusque testaceis; elytris haud elongatis, fortiter subseriatim punctatis.

Long. 9 millim.

Hab. Guatemala (*Sallé*), near the city, San Gerónimo, Tocoy (*Champion*).

Head elongate and narrow, dull, sparingly and rather coarsely punctate. Thorax a little narrower than the elytra, very shining, pale red, coarsely and moderately closely punctate, with a rather broad regular space along the middle impunctate. Elytra a little longer than the thorax, coarsely and closely punctate. Hind body quite sparingly punctate. Legs yellow.

The male has a broad, rather short lobe, subattenuate behind, on the fourth segment beneath, and a small, rather indistinct setigerous space on the same segment, there being on the preceding one a small transverse setigerous space; the lobe varies greatly in its development, and may be entirely absent. The female has no positive sexual characters.

An example of the male sex from Tocoy is figured.

16. **Cryptobium conforme.**

Angustulum, nitidum, rufescens ; capite nigro, oblongo ; prothorace nigricante, margine anteriore basique rufescentibus, crebrius fortiter punctato, medio longitudinaliter sat late lævigato ; elytris nitidis, crebre fortiter subseriatim punctatis, margine apicali angustius dilutiore ; abdomine nigricante, segmentorum marginibus plus minusve rufescentibus ; pedibus testaceis.
Long. 9 millim.

Hab. MEXICO, Oaxaca (*Höge*), Juquila (*Sallé*).

This species is closely allied to *C. æquale*, though with differently coloured head and thorax ; it is not quite so narrow in form. The head is shining, and has a deep and definite punctuation, very scanty in front, but dense near the rounded hind angles. The male has a rather long setigerous line on the third ventral plate, and a small tuft-bearing fovea on the fourth segment ; this segment is produced behind to form a narrow lobe, attenuate behind, reaching as far back as the hind margin of the next segment ; the female is without positive sexual marks.

17. **Cryptobium bicolor.**

Lathrobium bicolor, Grav. Micr. p. 179 [1].
Cryptobium bicolor, Er. Gen. et Spec. p. 563 [2].

Hab. NORTH AMERICA [1 2], United States.—MEXICO (*Mus. W. W. Saunders*).

18. **Cryptobium formosum.**

Angustulum, nitidum, rufum ; abdomine nigro, pedibus testaceis ; capite oblongo, crebre fortiter punctato, anterius parcissime punctato, nitido ; prothorace cylindrico, fortiter irregulariter punctato ; elytris quam prothorax paullo longioribus, dense fortiter punctatis, nitidis.
Long. 9 millim.

Hab. MEXICO, near the city (*Flohr*, *coll. Sharp*), Pinos Altos in Chihuahua (*Buchan-Hepburn*).

Similar to *C. bicolor*, though with a different arrangement of the colours. The head is narrow, scarcely broader than the thorax, this latter elongate, but little narrower than the elytra, with coarse, not dense, punctuation, and with the medial impunctate space less regular than usual, owing to being infringed on by a few punctures near the middle. The coxæ are but little darker than the femora.

Mr. Flohr sent me two females several years ago, and a slender example of the same sex with rather less vivid coloration was sent by Mr. Hepburn.

19. **Cryptobium concolor.**

Angustulum, brunneo-castaneum, nitidum ; pedibus antennisque testaceis ; capite oblongo, crebre sat fortiter punctato, nitido, anterius inter tubera opaco ; prothorace crebre fortiter punctato, medio sat longitudinaliter lævigato ; elytris quam prothorax paullo longioribus, dense fortiter punctatis, nitidis.
Long. 9 millim.

Hab. MEXICO, Presidio, Ventanas 2000 feet (*Forrer*).

The head is but little narrower than the thorax, and shining, with the exception of the depressed space between the tubercles. The thorax is rather broad, being about three fourths of the width of the elytra.

This species is similar in form to *C. formosum*, but the hind body is concolorous with the anterior parts. Only one female was obtained in each locality; the one from Ventanas has a slightly broader head and narrower thorax than the type.

20. **Cryptobium mixtum.** (Tab. XIII. fig. 14.)

Planatum, parum latum, rufum, capite nigro, elytris fuscescentibus, basi apiceque plus minusve rufescentibus, abdomine ante apicem nigricante, pedibus testaceis; capite oblongo, opaco, crebrius fere subtiliter punctato; prothorace nitido, dense, argute punctato, linea mediali lævigata sat angusta.
Long. 11 millim.

Hab. Panama, Volcan de Chiriqui below 6000 feet (*Champion*).

Antennæ red, with the middle joints blackish; third joint nearly one and a half times the length of the second. Mandibles red. Head as broad as the elytra, oblong, black, quite dull; eyes convex, punctuation rather close, but not coarse, absent from a broad space behind the labrum. Thorax two thirds of the width of the elytra. Elytra distinctly longer than the thorax, somewhat shining, blackish, with the base distinctly, the apex indistinctly, red; densely, moderately finely punctate. Hind body rather coarsely punctate; the penultimate segment, and the segment preceding it, black.

In the male the fourth segment beneath is furnished with an elongate lobe reaching farther back than the hind margin of the following segment; the lobe is broad and subacuminate behind, and there is a very obscure line of setigerous pubescence in front of its base, and on the preceding segment a more distinct line; the lobe of the fourth segment is sometimes entirely absent. The female has no positive sexual marks.

Four examples were obtained of this species. It is an ally of *C. fasciatum*, Er.

21. **Cryptobium chontalense.**

Planatum, parum latum, rufum, nitidum; capite nigro, elytris fascia lata abdomineque ante apicem nigricantibus, pedibus testaceis; capite subopaco, crebre fortiter punctato.
Long. 11 millim.

Hab. Nicaragua, Chontales (*Janson*).

This species is closely allied to *C. mixtum*, but differs in having the elytra shorter, only just longer than the thorax, &c. The head is not so dull, and is more definitely punctured; the elytra are more shining, more coarsely punctured, and the base and apex are rather broadly red.

Only one example has been procured. It is without positive sexual marks, but is no doubt a female.

22. **Cryptobium venustum.**

Subdepressum, rufescens, nitidum; capite nigro, subquadrato, crebrius fortiter punctato, subopaco; elytris crebre fortiter, basin versus subseriatim, punctatis, nitidioribus; abdomine piceo, apice rufo; pedibus testaceis.

Long. 10 millim.

Hab. MEXICO, Oaxaca, Jalapa (*Höge*).

The head is densely, coarsely and subobsoletely punctured behind, on the middle sparingly and definitely; the middle is a little shining, the impunctate portion between the antennal tubercles being dull. The thorax is red, shining, coarsely and closely punctured, at the base more sparingly and with a broad impunctate space along the middle. The elytra are about one third longer than the thorax, red, shining, rather coarsely, deeply, and closely but not densely punctate, the punctuation towards the apex much finer but quite definite. The male has a moderately broad setigerous space on the third ventral segment, and on the fourth a large circular setigerous fovea; this segment also is produced to form a broad short lobe. The female has no positive sexual marks.

The individuals of this species are similar in size and form to *C. similipenne*, but the two are readily distinguished by the coloration and differences in the details of the punctuation.

23. **Cryptobium coloratum.**

Subdepressum, sat latum, nitidum, piceo-rufum, antennis rufis, pedibus testaceis; capite subquadrato, opaco, crebrius fortiter punctato; prothorace crebre fortiter punctato, medio sat late longitudinaliter lævigato; elytris nitidioribus, rufis, sat fortiter haud dense punctatis; abdomine apice dilutiore.

Long. 11 millim.

Hab. GUATEMALA (*Sallé*).

The unique example of this species is very closely allied to *C. venustum*, but is a rather larger and broader insect, with rather coarser punctuation on the elytra, and different characters in the male; the third segment in this sex has a somewhat narrow transverse setigerous space, and the next a small circular pubescent spot; this segment, moreover, is produced so as to form a rather long lobe, broad at the base but much attenuate behind.

24. **Cryptobium politulum.**

Subdepressum, nitidum, piceum; antennis rufis, pedibus testaceis; capite subquadrato, crebre fortiter punctato; prothorace crebre fortiter punctato, medio sat late longitudinaliter lævigato; elytris crebre fortiter profundeque subseriatim punctatis.

Long. 9½ millim.

Hab. MEXICO, Uruapan (*Flohr, coll. Sharp*).

This species is very closely allied to *C. venustum*, but is, I have no doubt, distinct, as, in addition to its more dilute and uniform colour, it is rather smaller, has a more shining,

rather more sparsely and finely punctate head, and rather shorter elytra. I have seen only two females, one of which is very mutilated.

25. Cryptobium complectens.

Subdepressum, piceum, supra nigrum, elytrorum margine apicali anguste flavo, abdominis segmentorum marginibus ferrugineis; antennis rufis, pedibus pallide flavis; capite subquadrato, crebrius sat fortiter punctato, minus opaco; prothorace fere dense fortiter punctato, medio sat late longitudinaliter lævigato; elytris crebre fortius subseriatim punctatis, parum nitidis.
Long. 11 millim.

Hab. Mexico, Yautepec, Morelos (*Flohr*, *coll. Sharp*).

This is another species closely allied to *C. venustum*, and differs in little besides the colour; the thorax, however, is slightly larger and rather more closely punctate. I have seen but one female.

26. Cryptobium stygicum.

Subdepressum, nigrum; antennis rufis, pedibus testaceis; capite latiusculo, crebre subobsolete punctato, peropaco; prothorace cylindrico, nitido, crebrius fortiter punctato, linea mediali parum lata impunctata; elytris quam prothorax longioribus, creberrime, sat fortiter, subrugulose punctatis; abdomine parce punctato, fere opaco.
Long. 9–11 millim.

Hab. Mexico, Oaxaca, Jalapa (*Höge*); Guatemala (*Sallé*), San Joaquin (*Champion*).

In the male there is a rather short transverse setigerous impression near the hind margin of the third ventral plate; on the following segment there is a deep circular fovea with a short tuft of setæ springing from it, and the hind margin of this segment is produced so as to form a very broad short lobe, reaching hardly as far back as the hind margin of the next segment, and having its hind margin rounded. The female is usually smaller and more slender than the male, but has no positive sexual marks.

This species agrees with *C. collare* in the sculpture of the head and hind body, but the individuals are a good deal smaller in size, and are readily distinguished by the denser and rather finer punctuation of the thorax and elytra in addition to the different sexual characters. Herr Höge obtained a good series, and Mr. Champion and M. Sallé one example each.

27. Cryptobium tinctipenne.

Subdepressum, haud latum, piceum; capite nigro, antennis rufis, pedibus testaceis; capite oblongo, crebre subobsolete punctato, peropaco; prothorace cylindrico, nitido, crebrius fortiter punctato, linea mediali parum lata impunctata; elytris quam prothorax longioribus, creberrime sat fortiter punctatis; abdomine parce punctato, fere opaco.
Long. 9–10 millim.

Hab. Guatemala (*Sallé*), San Gerónimo, San Joaquin, Tamahu, Cahabon, Chacoj (*Champion*).

This is a species very closely allied to *C. stygicum*, but has a considerably narrower

head, and the colour is usually not so dark, especially on the underside. The male has a small setigerous impression on the third ventral plate, and on the fourth plate an obsolete very small fovea; this plate projects backwards as a very broad short lobe, not reaching so far back as the hind margin of the following segment.

The colour varies somewhat in this species; frequently the base and sides of the wing-cases are rufescent, and sometimes this colour is only visible on them as an obscure humeral spot.

Banks of streams (*Champion*).

28. **Cryptobium guatemalense.**

Subdepressum, nigrum; antennis rufis, pedibus testaceis; capite latiusculo, crebre subobsolete punctato, opaco; prothorace cylindrico, nitido, crebrius fortiter punctato, opaco, linea mediali parum lata impunctata; elytris quam prothorax paullo longioribus, creberrime sat fortiter et subrugulose punctatis; abdomine parce punctato, fere opaco.

Long. 10–11 millim.

Hab. GUATEMALA, Paraiso 300 feet, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*).

This species is very closely allied to *C. stygicum*, but the male characters agree rather with those of *C. tinctipenne*, and the elytra are a little shorter, being not more than one sixth longer than the thorax; the head, too, is not quite so dull, and its punctuation is rather closer and less obsolete; as a series of seven examples is constant in these respects I must consider them to represent a species distinct from either *C. stygicum* or *C. tinctipenne*. From San Gerónimo only a very damaged example has been received, and there is only one exponent from Nicaragua.

29. **Cryptobium puncticolle.**

Subdepressum, nigrum; antennis rufis, pedibus testaceis; capite latiusculo, dense subobsolete punctato, peropaco; prothorace cylindrico, nitido, dense fortiter punctato, linea mediali antice fere interrupta, impunctata; elytris quam prothorax longioribus, creberrime sat fortiter et subrugulose punctatis; abdomine fere opaco.

Long. 10 millim.

Hab. GUATEMALA, San Isidro 1600 feet, Zapote (*Champion*).

This species also is extremely close to *C. stygicum*, but the punctuation of the head and thorax is a good deal, and that of the elytra slightly, denser; the elytra also are rather shorter. It is equally near to *C. guatemalense*, but the more dense punctuation of the head will not permit me to unite the two. The two examples obtained do not quite agree, that from Zapote having the head rather more densely punctured and less dull, and the male characters as in *C. tinctipenne*, whereas in the type the fovea of the fourth segment of the male is entirely obsolete.

30. **Cryptobium modestum.**

Subdepressum, sat latum, nigrum, nitidum; antennis rufis, pedibus testaceis; capite latiusculo, crebre subob-

solete punctato, peropaco; prothorace cylindrico, crebre fortiter punctato, medio longitudinaliter lævigato; elytris quam prothorax longioribus, crebrius fortiter punctatis; abdomine parce punctato.
Long. 10–12 millim.

Hab. PANAMA, San Miguel in the Pearl Islands (*Champion*).

This species is closely allied to *C. collare*, and particularly resembles it in the punctuation of the head and thorax, but the examples are not half the size, and the upper surface is concolorous. The male has a transverse setigerous impression emitting two small tufts near the hind margin of the third ventral plate, and on the following segment a very obscure transverse setigerous mark; the hind margin of this segment may be either simple or produced to form a very broad moderately short lobe; the female is without positive sexual marks. Three examples were captured.

Banks of small streams (*Champion*).

31. **Cryptobium jejunum.**

Subdepressum, nigrum, nitidum; antennis rufis, pedibus testaceis; capite subquadrato, crebrius fortiter argute punctato, opaco; prothorace cylindrico, crebre fortiter punctato, medio longitudinaliter lævigato; elytris quam prothorax paullo longioribus, crebre fortiter profunde punctatis, nitidis.
Long. 11 millim.

Hab. GUATEMALA, Torola 1000 feet (*Champion*). Four examples.

This differs from the preceding species by the deep definite punctuation of the head and the coarse less dense punctuation of the wing-cases; by these characters it more resembles *C. similipenne*, but the punctuation of the head in *C. jejunum* is much coarser, and the ventral lobe of the male is narrower; in other respects the male characters are similar to those of *C. similipenne*, there being a rather long transverse line bearing setæ on the third segment, and on the next segment a rather small and deep nearly circular tuft-bearing fovea; the ventral lobe of this segment is rather short, reaching to the hind margin of the following segment, and is much attenuate behind, its apex, however, being quite rounded.

32. **Cryptobium derasum.**

Subdepressum, nigrum; antennis rufis, pedibus testaceis; capite subquadrato, crebre subobsolete punctato, opaco, inter oculos parce argute punctato, nitido; prothorace cylindrico, crebrius fortiter punctato, nitido, linea mediali impunctata; elytris quam prothorax longioribus, crebrius sat fortiter punctatis, nitidis.
Long. 11 millim.

Hab. GUATEMALA, near the city, and San Gerónimo (*Champion*).

This species is another very close ally of *C. stygicum*, and the elytra are one third longer than the thorax, as in that species, but they are rather more coarsely punctate and shining, as in *C. modestum*; the punctuation on the basal portion near the suture is rugulose; the species is, however, readily distinguishable by the shining spot on the head near the front. The male has a small setigerous impression on the third ventral

plate, and a very minute circular spot on the next segment; the hind margin of this is produced into a very broad rounded lobe reaching as far back as the hind margin of the following segment; the female has no positive sexual marks.

Only one pair was met with at San Gerónimo, and one example at Guatemala city; this latter is a male with narrow head, without ventral lobe, and with a large fovea in place of a minute one on the fourth segment; it may prove to be a distinct species.

33. **Cryptobium crassulum.**

Minus gracile, subdepressum, piceum; capite thoraceque nigricantibus, antennis rufis, pedibus testaceis; capite suboblongo, opaco, crebrius subobsolete punctato; prothorace minus gracili, crebrius fortiter punctato, medio sat late longitudinaliter lævigato; elytris dense vix fortiter punctatis, subopacis.

Long. 11 millim.

Hab. Mexico, Cuernavaca (*Sallé*).

This species is allied by its colour to *C. tinctipenne*, and by its shape and general appearance to *C. derasum*, but is readily identified by its considerably broader thorax, the length of this part being hardly at all greater than the width; the head is not very large, but little broader than the thorax; the antennæ are clear red in colour; the tibiæ a good deal darker than the femora; the elytra are about one third longer than the thorax.

The two examples are in a bad state of preservation, and are females without positive sexual marks.

34. **Cryptobium certatum.**

Minus gracile, subparallelum, subdepressum, haud nitidum, piceo-rufum; capite thoraceque nigricantibus, antennis rufis, pedibus testaceis; capite suboblongo, opaco, crebrius subobsolete punctato; prothorace crebrius punctato, medio minus late longitudinaliter lævigato; elytris densius fere subtiliter punctatis, subopacis, basi externe rufescente.

Long. $8\frac{1}{2}$ millim.

Hab. Nicaragua, Managua (*Sallé*).

The head is not large, not at all broader than the thorax; this latter slightly narrowed behind, and but little narrower than the elytra.

This species is readily recognizable by its form, though connected by means of *C. crassulum* with *C. derasum* and *C. tinctipenne*. Only one example, of the female sex, has been received.

35. **Cryptobium similipenne.**

? *Lathrobium similipenne*, Say, Trans. Am. Phil. Soc. iv. p. 153; Lec. Say's Amer. Ent. ii. p. 568[1].
Cryptobium similipenne, Er. Gen. et Sp. p. 270[2].

Hab. Mexico [1] [2], near the city (*Flohr*, *coll. Sharp*), Cordova (*Sallé*), Jalapa, Oaxaca (*Höge*).

On the authority of the type in Chevrolat's collection, I identify as Erichson's species a not uncommon Mexican *Cryptobium* frequently bearing the above name in collections. I do not know on what evidence Erichson considered this to be Say's *L. similipenne*, the description of Say being extremely imperfect, but not, I am inclined to think, referring to any species of *Cryptobium*. The insect I am now alluding to is very similar to *C. stygicum*, but may be readily distinguished by the sculpture of the head and elytra, the former being more densely and deeply and definitely punctate and not so completely dull; the elytra are shorter, quite shining, more coarsely and considerably less densely punctate. The tibiæ are deeply infuscate. The male has a rather extensive transverse setigerous mark on the third ventral segment, and on the following segment a moderately large and deep, nearly circular fovea, with a small tuft springing from it; the hind margin projecting so as to form a very broad, rather long lobe with greatly rounded extremity.

36. **Cryptobium assimile.**

Cryptobium assimile, Er. Gen. et Spec. Staph. p. 570[1].

Hab. Mexico (*coll. Chevrolat*)[1].

The type of this species in Chevrolat's collection is an insect allied to *C. antoniense* and *C. filarium*, but not agreeing sufficiently with either to lead me to suppose it to be conspecific; unfortunately it is a female.

37. **Cryptobium flohri.**

Subdepressum, latiusculum, nigrum, nitidum; antennis rufis, pedibus testaceis; capite subquadrato, nitido, crebrius fortiter punctato; prothorace crebre fortiter punctato, medio longitudinaliter late lævigato; elytris quam prothorax paullo longioribus, dense fortiter et profunde punctatis, nitidis; abdomine crebrius subtiliter sed sat profunde punctato.

Long. 12 millim.

Hab. Mexico, near the city (*Flohr*, *coll. Sharp*), Oaxaca (*Höge*).

This species though similar to *C. similipenne* is larger and broader, and is readily distinguished by the head being polished, especially in front; the thoracic punctuation is less dense than in *C. similipenne*, and that of the wing-cases is remarkably deep and definite. The male has a rather elongate line bearing setæ on the third segment, and on the following segment there is a large transverse setigerous space, having also considerable extension in the longitudinal direction, its hind margin being curved and less definite than the anterior; this segment also bears behind a very broad lobe, extending back beyond the hind margin of the next segment; towards the extremity this lobe is a good deal attenuate, its hind margin being, however, quite rounded. The female is without positive sexual characters.

I received a pair of this species (found near the city of Mexico) some years ago from Mr. Flohr, and there is a single female amongst Herr Höge's captures.

38. **Cryptobium antoniense.**

Angustulum, nigrum; antennis rufis, pedibus testaceis; capite oblongo, crebre fortiter subobsolete punctato, peropaco; prothorace crebrius profunde punctato, linea mediali impunctata; elytris quam prothorax paullo longioribus, dense, fortiter et profunde punctatis, nitidis, margine summo apicali piceo; abdomine minus subtiliter punctato.
Long. $8\frac{1}{2}$ millim.

Hab. GUATEMALA, Paso Antonio 400 feet (*Champion*).

Antennæ rather stout; red, tenth joint evidently longer than broad, the intermediate joints a little clouded. Head as broad as the elytra, straight at the sides, with prominent eyes. Thorax cylindric, a little narrower than the head and elytra; the latter only about one eighth part longer than the thorax. Tibiæ scarcely darker than the femora.

The unique example is in a bad state of preservation, abraded and broken; it appears to have the abdominal punctuation coarser though not deeper than usual; it is a male, and has a short transversely elliptical impression on the third ventral plate, and a circular fovea on the next segment; there is no lobe.

This species and *C. filarium* have the elytra more coarsely punctured and shining than in the species placed immediately after them.

Banks of streams in the low country (*Champion*).

39. **Cryptobium filarium.**

Angustulum, nigrum; antennis rufis, pedibus testaceis; capite oblongo, crebrius subobsolete punctato, opaco; prothorace crebrius profunde punctato, linea mediali impunctata; elytris quam prothorax longioribus, dense fortiter et profunde punctatis, nitidis, margine summo apicali piceo; abdomine sat crebre punctato.
Long. 9 millim.

Hab. GUATEMALA, Paso Antonio 400 feet (*Champion*).

The unique example has no positive sexual marks, but is no doubt a female. Though closely allied to *C. antoniense* I cannot consider it to be the other sex thereof, the head being more narrowed behind; the general form is rather more slender, the antennæ are a little more slender, the elytra a little longer, and the punctuation of the hind body apparently finer.

40. **Cryptobium errans.**

Nigrum; antennis rufis, pedibus testaceis; capite subquadrato, opaco, dense, vix subtiliter, minus profunde punctato; prothorace cylindrico, nitido, dense punctato, linea mediali impunctata; elytris quam prothorax longioribus, densius vix subtiliter punctatis, subnitidis.
Long. $10\frac{1}{2}$ millim.

Hab. PANAMA, Caldera in Chiriqui 1200 feet (*Champion*).

Antennæ elongate and slender, the tenth joint being a good deal longer than broad. Head quite as broad as the elytra.

This species most resembles *C. puncticolle*, but has considerably more slender antennæ, more finely punctured head, and longer and rather more coarsely punctured elytra. The

less deep and definite punctuation of the head and the less fine sculpture of the wing-cases will not allow it to be united with *C. tenuicorne* or its immediate allies. The only example before me is in a very decayed condition, but is no doubt a female, as it possesses no positive sexual marks.

41. **Cryptobium rugosipenne.**

Minus gracile, nigrum; abdomine piceo, antennis rufis, pedibus testaceis; capite subquadrato, densius subtiliter argute punctato, subnitido; prothorace densius minus fortiter punctato, linea mediali lævigata minus lata; elytris quam prothorax paullo longioribus, densissime vix subtiliter punctatis, rugulosis.

Long. 9 millim.

Hab. Panama, Peña Blanca 4000 feet (*Champion*).

Antennæ neither elongate nor slender. Head very closely punctate, but the fine interstices are distinctly shining, and the impunctate space behind the labrum is quite polished. Thorax less cylindric than in the allied species, the sides being a little dilated in front of the middle, its punctuation very close, its impunctate line disappearing in front, and encroached on behind by the punctuation so as to be compressed, and in this part rather deeply canaliculate.

The unique example, which is in a very decayed condition, is apparently, judging from the absence of conspicuous sexual marks, a female.

Banks of rapid streams in the forest (*Champion*).

42. **Cryptobium confine.**

Gracile, nigrum; antennis rufis, pedibus testaceis, coxis rufo-obscuris; capite breviter suboblongo, dense subtiliter argute punctato, subnitido; prothorace cylindrico, nitido, dense punctato, linea mediali angusta impunctata; elytris quam prothorax longioribus, densius vix subtiliter punctatis, subnitidis.

Long. $8\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species, though closely allied to *C. rugosipenne*, is a much more slender insect, with very much smaller head, which is even slightly narrowed behind the eyes, instead of being slightly dilated; the cephalic punctuation is dense and rather definite, but on the space between the antennal tubercles there are only a few punctures, these being of larger size. The thorax and elytra are less elongate than in *C. tenuicorne*, to which, on account of its stature and slender form, *C. confine* is very similar. The only example is a female, and has lost the greater part of its antennæ.

43. **Cryptobium arduum.**

Gracile, nigrum; antennis coxisque rufis, pedibus testaceis; capite oblongo-subquadrato, densius subtiliter argute punctato, subnitido; prothorace cylindrico sed anterius magis evidenter angustato, dense punctato, linea mediali arguta impunctata; elytris quam prothorax longioribus, densius minus fortiter punctatis, subrugulosis.

Long. $8\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ elongate. Head, though rather broad, a good deal rounded at the sides behind, very definitely punctured on the anterior half, but the punctuation very scanty towards the labrum.

The unique example does not agree sufficiently with *C. confine* to allow me to unite it therewith; it has a much larger head and more slender thorax, but it is possible the two may be the sexes of one species. The male characters consist of a moderately broad depression on the third segment, and a rather large and deep, nearly circular (but slightly transverse), fovea on the fourth segment, the hind margin of the latter being prolonged to form a rather slender elongate lobe.

44. **Cryptobium tenuicorne.**

Gracile, nigrum; antennis rufescentibus, pedibus cum coxis testaceis; capite suboblongo, opaco, crebrius subobsolete punctato; prothorace cylindrico, nitido, dense punctato, linea mediali angusta impunctata; elytris elongatis, quam prothorax multo longioribus, dense fere subtiliter punctatis.
Long. $9\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba 800 to 1500 feet (*Champion*).

Antennæ very slender, elongate. Head elongate and rather narrow, very dull, except a quite small space immediately behind the labrum in the middle. Elytra elongate and narrow, their sides quite parallel.

This species is distinguished among its immediate allies of slender form with delicate antennæ by its very dull head, the punctuation of which is quite obsolete on the part in front of the middle of the eyes. The male has a rather deep transverse impression on the third ventral plate, but none on the following segment, the hind margin of which forms a broad very short lobe. Two male examples were captured.

Banks of small streams in the forest (*Champion*).

45. **Cryptobium ovaticeps.**

Nigrum; antennis rufis, pedibus testaceis, coxis fuscis; capite oblongo-ovali, densius subtiliter sat argute punctato, subopaco; prothorace cylindrico, nitido, dense punctato, linea mediali angusta impunctata; elytris elongatis, quam prothorax longioribus, densius vix subtiliter punctatis, subnitidis.
Long. $8\frac{1}{2}$ millim.

Hab. GUATEMALA, Lanquin (*Champion*); PANAMA, Bugaba 800 to 1500 feet, Caldera in Chiriqui 1200 feet (*Champion*).

This is a slender species with elongate antennæ, and long, narrow, parallel-sided elytra like *C. tenuicorne*; the head, however, of *C. ovaticeps* differs from that of *C. tenuicorne* in being a little narrowed behind the eyes, and the dense rather fine punctuation, deep and definite on the anterior half and extending nearly to the front margin, leaving only a small elevated space behind the labrum impunctate and polished: as in *C. tenuicorne* the slender thorax has the sides a little rounded and narrow in front. The male has a very short transverse setigerous space on the third segment, and a very minute round fovea on the next, the hind margin of this latter segment being a little prolonged in

the middle so as to form a very broad and very short lobe. In one male, however, the lobe is entirely wanting, and the setigerous space of the third segment is very much reduced in size. The female is without positive sexual marks.

Six examples were met with at Caldera and one in each of the other localities; all are in a bad state of preservation.

46. **Cryptobium celatum.**

Gracile, nigrum; antennis rufis, pedibus cum coxis testaceis; capite dense punctato, medio parce punctato et nitido; prothorace cylindrico, nitido, crebre fortiter punctato, linea mediali lævigata lata; elytris elongatis, densissime fere subtiliter punctatis, subopacis.

Long. $9\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*).

This species, though very similar to *C. ovaticeps*, cannot be confounded therewith on account of the much less dense punctuation of the thorax. The head, though it may be described as oblong-oval, is not so slender as in *C. ovaticeps*; its punctuation is very dense behind, more scanty and coarser on the disc, and there quite shining, and does not extend to the front margin. The thorax is very slender and the elytra very elongate; the antennæ are long and slender. The two examples are females, without positive sexual marks; the one from Guatemala city has rather longer elytra, which, together with the hind body, are also broader. If the difference in the shape of the head between *C. celatum* and *C. subgracile* should prove sexual, the two may prove to be one species; but I do not think this very probable.

Banks of streams in comparatively open places (*Champion*).

47. **Cryptobium subgracile.**

Subdepressum, nigrum; antennis rufis, pedibus cum coxis testaceis; capite suboblongo, minus gracili, dense fere argute punctato, subnitido; prothorace subcylindrico, crebrius fortiter (basin versus parcius) punctato; elytris elongatis, subampliatis, densius vix subtiliter punctatis, subopacis; abdomine crebrius punctato.

Long. 10 millim.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

This species has the facies of *C. longipenne*, though it is very much smaller in size; the very elongate elytra are less parallel than in *C. tenuicorne*, which species also *C. subgracile* much resembles, though it has the punctuation on the basal part of the thorax much more scanty. The antennæ are extremely elongate and slender; the head is rather broad, and the punctuation on the part in front of the eyes quite scanty. The colour of the under surface in the unique example is piceo-rufous, but it is perhaps not quite mature; the specimen is a male, and has a rather obscure, short, transverse, setigerous impression on the third segment, and a small, shallow, circular setigerous mark on the next, the hind margin of this fourth segment being produced so as to form a broad, elongate, parallel-sided lobe, with quite rounded extremity.

48. **Cryptobium apicipenne.**

Haud latum, subparallelum, nigrum, opacum; antennis picescentibus, basi rufa, pedibus elytrorumque apice summo pallide flavis; capite minore, subquadrato, peropaco, obsolete punctato; prothorace densius fortiter punctato, medio linea angusta lævigata minus arguta; elytris quam prothorax paullo longioribus, densius et fortiter punctatis, subrugosis.

Long. $7\frac{1}{2}$ millim.

Hab. MEXICO, Playa Vicente (*Sallé*), Jalapa, Oaxaca (*Höge*), Tlalcotalpam (*Flohr, coll. Sharp*); GUATEMALA, Paso Antonio, 450 feet (*Champion*); NICARAGUA, Greytown (*Janson*).

The male has a rather large transverse setigerous impression on the third ventral plate, and a slightly smaller one on the next; the hind margin of this latter segment may be produced to form an extremely broad short lobe, or this lobe may be entirely absent; the size of the setigerous impressions, too, is apparently variable. The species is readily recognized, and not very similar to any other known to me. I have an example in my collection purporting to come from the United States, but the locality is doubtful.

49. **Cryptobium nasutum.** (Tab. XIII. fig. 16.)

Angustum, subcylindricum, nigricans; antennis pedibusque sordide testaceis; capite prothoraceque opacis, illo elongato, subrugose obsolete punctato, hoc linea mediali nitida, parce subtilissime punctato; elytris crebrius, fortiter et profunde punctatis, subnitidis.

Long. 8 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Head elongate, swollen on each side at the base of the mandibles; eyes convex, placed about the middle of the sides; the surface quite dull, impunctate in front, rugosely but indistinctly punctate behind. Thorax slender, subcylindric, a little narrower than the elytra, almost impunctate, very dull with a shining space extending along the middle of its entire length. Hind body a little shining, rather closely punctate.

In the male the fourth segment beneath is armed with a long spine, extending as far back as the hind margin of the sixth segment; the hind trochanters are very much prolonged, and exhibit a slender, acute, free extremity.

Three examples have been obtained of this distinct species. *C. nasutum* differs from the rest of the section in that the line on the side of the elytron joins the margin far in front of the extremity.

§ 2. *Elytra without lateral raised line.*

50. **Cryptobium nigriventre.** (Tab. XIII. fig. 21.)

Minus depressum, colore instabile, rufescens, plus minusve piceo-tinctum; abdomine supra nigricante, segmentis duobus ultimis marginibus testaceis; antennis rufis, medio fuscescentibus; pedibus albido-flavis, coxis rufis; capite prothoraceque parce punctatis; elytris dense fortius et profunde punctatis, margine apicali vage rufescente; stylis analibus corneis lateraliter compressis.

Long. 10 millim.

Hab. Mexico, near the city (*Flohr*, *coll. Sharp*), Cordova, Playa Vicente (*Sallé*), Jalapa, Oaxaca (*Höge*); Guatemala (*Sallé*), near the city, and San Gerónimo (*Champion*).

Head rather narrow, not much more than half as broad as the elytra, sparingly but coarsely punctate, somewhat shining, with large convex eyes. Thorax slightly narrower than the head, the sides a good deal rounded in front, very slightly narrowed behind, coarsely but sparingly punctate, there being a broad impunctate space along the middle, and on either side of this an irregular double series of punctures imperfectly separated from the lateral punctuation; the surface dull, minutely coriaceous. Elytra very distinctly longer than the thorax, with remarkably deep coarse punctuation.

In the male the terminal ventral plate is broadly and rather deeply emarginate; but the base of the emargination in the middle is armed with a slight angular projection; the lateral lobe of the armature is much broader than in the female, the under margin is rounded, the upper margin nearly straight, but with a small upward curvature at the apex, causing it to be minutely acuminate; there is also an obscure setigerous impression on the third ventral plate, and a transverse pubescent line on the next segment.

This is one of a group of species characterized by the peculiar construction of the external genital armature. It varies much in colour; very red examples were labelled "*C. nigriventre*, Chev.," in Sallé's collection. A very dark example of the male sex from Guatemala city is figured.

51. **Cryptobium cognatum.**

Minus depressum, nigricans; capite prothoraceque dilute rufo-castaneis, elytris piceis, margine summo apicali angustissime pallido, abdominisque segmentis duobus ultimis posterius flavo-marginatis; antennis rufis, pedibus pallide flavis; prothorace minus nitido, utrinque crebre punctato; elytris densissime, profunde, vix fortiter punctatis, subrugosis.

Long. 9 millim.

Hab. Panama, Tolé, San Feliz (*Champion*).

This species is very closely allied in all respects to *C. nigriventre*, except that the punctuation of the elytra is much denser and finer, and the head and thorax generally more slender. The male has a small setigerous impression on the third ventral plate, and an elongate transverse pubescent line on the next plate; the terminal segment is broadly but slightly emarginate behind, and with a very slight angular projection in the middle of the emargination.

Seven examples, agreeing closely with one another, were met with. Sandy banks of rivers (*Champion*).

52. **Cryptobium perforatum.**

Minus depressum, nigricans; capite rufo, antennis pedibusque testaceis, elytrorum margine summo abdominisque

segmentis duobus ultimis posterius flavescentibus; prothorace densius fortiter punctato, linea angusta mediali impunctata; elytris dense, fortiter et profunde punctatis.
Long. 10 millim.

Hab. NICARAGUA, Managua, Granada (*Sallé*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet, David (*Champion*).—VENEZUELA, Caracas (*Thième*).

This is another species very closely allied to *C. nigriventre*, but distinguished by the dense, coarse, thoracic punctuation, the surface of the thorax, moreover, being shining; the punctuation of the head is dense and subobsolete behind, very scanty on the middle, and absent in front. The male has a transverse setigerous space on the third ventral plate, and an elongate transverse pubescent line on the next plate; but the terminal segment is not emarginate. The female has no positive sexual marks.

Six examples from our region are before me; the example from David is a small dark variety of the male sex. The example from Venezuela was sent me by M. Réné Oberthür, named *C. sulphuripes*, Er., but does not accord sufficiently with the description of that species.

53. **Cryptobium centrale.** (Tab. XIII. fig. 20.)

Piceum; antennis pedibusque rufis, elytris piceo-rufis; capite haud elongato, post oculos rotundato, cumque thorace nitido, hoc irregulariter punctato, medio longitudinaliter late lævigato; elytris quam prothorax longioribus, dense, parum profunde, sat subtiliter punctatis, subopacis.
Long. $9\frac{1}{2}$ millim.

Hab. MEXICO, Jalapa, Oaxaca (*Höge*); GUATEMALA (*Sallé*), San Gerónimo, Tocoy, San Isidro 1600 feet (*Champion*); NICARAGUA, Chinandega (*Sallé*).

Head short and broad; eyes rather large and convex, placed about the middle of the sides; the surface shining, coarsely punctate, a few minute punctures mixed with the larger ones, the anterior part depressed and dull, impunctate. Thorax very shining, a little narrower than the head, and distinctly narrower than the elytra, a broad space on the middle impunctate, and on either side of this with numerous rather coarse irregularly-distributed punctures. Elytra reddish, more or less infuscate, very closely punctate. Hind body extremely finely punctate.

The male has the posterior trochanters prolonged, so as to form a long slender free spine lying parallel with the femur; the fourth ventral segment is provided with a large elongate nearly parallel-sided lobe, its extremity truncate or very feebly emarginate, and with the angles a little enlarged; at the base of the lobe there is a transverse slightly curved setigerous depression, and the seventh segment is provided at the apex with a rather deep angular excision. The female has a curved elevation near the base of the fourth segment. In certain examples which I consider, though with hesitation, to be less developed males of the same species, the ventral lobe is narrower, a little shorter, and has a slightly rounded extremity. The figure represents a small male of unusually rufescent coloration.

54. **Cryptobium affine.**

Fusco-rufum; capite piceo, antennis pedibusque rufis; capite haud elongato, post oculos rotundato, cumque prothorace nitido, hoc irregulariter punctato, medio longitudinaliter late lævigato; elytris quam prothorax paullo longioribus, dense sat subtiliter punctatis.

Long. $7\frac{1}{2}$ millim.

Hab. MEXICO, Jalapa, Oaxaca (*Höge*); NICARAGUA, Chontales (*Janson*).

There seems little to distinguish this species from some of the varieties of *C. centrale*, except the smaller size and the different male characters; in the sex alluded to the fourth ventral plate is provided with a lobe of variable length, which tapers from the base to the apex, the latter being nearly acuminate; the setigerous mark at the base of this lobe is feeble, and differs but little from the curvate elevation that exists in the females of both *C. affine* and *C. centrale*.

55. **Cryptobium grandicolle.**

Nigrum; antennis pedibusque rufis; capite haud elongato, post oculos rotundato, cumque prothorace nitido, hoc ad latera parce punctato, medio latius longitudinaliter impunctato; elytris prothoracis longitudine, crebrius minus fortiter punctatis.

Long. 11 millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Balheu in Vera Paz (*Champion*).

Although closely allied to *C. centrale* this species is larger, darker in colour, and has the thorax larger, so that it is scarcely perceptibly shorter than the elytra; these latter are less densely punctate, and the thoracic punctuation also is more scanty. The male characters are the same as in the variety of *C. centrale* with narrow attenuate lobe. Only one example has been received from each locality.

56. **Cryptobium brevipenne.** (Tab. XIII. fig. 17.)

Piceum, angustulum, subdepressum; antennis pedibusque rufis; prothorace vage punctato; elytris quam prothorax haud latioribus et multo brevioribus.

Long. 9 millim.

Hab. GUATEMALA, Purula in Vera Paz 4000 feet (*Champion*).

Head rather broad and short, sparingly punctate, dull; eyes quite small, not at all prominent. Thorax large, slightly narrowed behind, rather sparingly and coarsely but subobsoletely punctate, with a broad space along the middle impunctate. Elytra narrow at the shoulders, coarsely and closely but not deeply punctate, shining. Hind body rather closely punctate, reddish in colour behind.

The small eyes and short elytra render this a very distinct species. The only example that has reached me is a male; it has the fourth ventral segment provided with an elongate rather slender lobe, narrowed behind so as to be almost acuminate at the apex, and in front of the base of the lobe there is a transverse setigerous depression. Banks of streams in the forest (*Champion*).

57. **Cryptobium inquisitor.**

Nigrum, nitidum; antennis piceo-rufis, pedibus testaceis, coxis fuscis; capite nitido, crebre fortiter, anterius parce, punctato; prothorace crebrius punctato, medio sat late longitudinaliter impunctato; elytris quam prothorax vix longioribus, densius minus fortiter rugoso-punctatis.

Long. $8\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, Balheu, San Joaquin and Tamahu (*Champion*).

Though allied to *C. centrale* this is a smaller and much narrower insect, with a differently shaped head, the eyes being but little prominent, and there being but little constriction in front of them; the third joint of the antennæ is not longer than the second. The structure of the terminal ventral plate in the male is very remarkable: it is very deeply longitudinally impressed from the base to the apex, the impression being divided into three parts; the anterior is slightly narrower than the others, and its sides terminate as a minute denticle projecting backwards; the middle depression has an indefinite longitudinal elevation on its middle, while the apical one is cut away to a large extent by an elongate narrow notch. The fourth ventral plate projects behind as a rather narrow lobe, attenuate behind. The female has no positive sexual marks.

58. **Cryptobium monticola.**

Minus latum, subparallelum, nigrum, nitidum; antennis piceo-rufis, pedibus testaceis, coxis fuscis, tibiis fuscescentibus; capite suboblongo, nitido, crebre fortiter et profunde punctato; prothorace crebrius punctato, medio minus late longitudinaliter impunctato; elytris quam prothorax vix longioribus, densius minus fortiter rugoso-punctatis.

Long. 8 millim.

Hab. GUATEMALA, Quiche mountains 7000 to 9000 feet (*Champion*).

This species is extremely similar to *C. inquisitor*, but has a rather longer head, which, moreover, is a good deal more closely punctured, and the male characters are different; in this sex the third ventral plate has in the middle behind a shining elevated space somewhat like a flattened tubercle, in the middle of which there is a minute fovea, which is probably pubescent, and on the middle of the next segment there is a similar space, but less elevated and destitute of fovea; the terminal ventral plate has in the middle behind a narrow deep notch, the anterior part of which is contracted and placed in a longitudinal depression; at the front of this depression there is an excessively minute tubercle, and the depression is prolonged to the base of the segment as a slender longitudinal channel. The female has no positive sexual marks. Only three examples were obtained. Banks of streams in the pine-forest region (*Champion*).

59. **Cryptobium mexicanum.**

Minus latum, subparallelum, nigrum, nitidum; antennis fusco-rufis, pedibus testaceis; capite sat crebre, argute, anterius parce, punctato, nitido, oculis haud magnis; prothorace crebre punctato, medio sat late longitudinaliter lævigato; elytris quam prothorax vix longioribus, dense minus fortiter punctatis.

Long. $8\frac{1}{2}$ millim.

Hab. Mexico, Oaxaca (*Höge*).

This species greatly resembles *C. inquisitor*, but has a much more sparingly punctate thorax; and the male characters of the third and fourth segments are very different; on the third segment there is in the middle behind a slightly elevated, round tubercle, impressed with a fovea, and on the fourth segment a very large, slightly impressed pubescent space, arcuate in front, nearly straight behind, without projecting lobe; the terminal ventral plate has at the apex a long narrow excision, the front part of which extends forward into a deeply depressed oblong space; in front of this space there is another deep narrow depression, extending forward nearly to the base of the segment. Only one example has been obtained.

60. **Cryptobium lithocharinum.**

Minus elongatum, subdepressum, subparallelum, nitidum, piceum; capite thoraceque nigris, antennis, pedibus elytrisque ad humeros rufis; capite quadrato, omnium densius fortiter et profunde punctato, nitido; prothorace crebre obsolete punctato, medio longitudinaliter impunctato, pernitido; elytris quam prothorax paullo longioribus, dense minus fortiter punctatis, nitidis; abdomine apicem versus crebrius argute punctato.
Long. $7\frac{1}{2}$ millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

This is a very distinct species, with comparatively short and stout legs and antennæ; the labrum is but little prominent, and is apparently depressed, rather than divided, in the middle, without denticles. The only example obtained is a male, with a moderately deep, sharply-defined angular notch on the last ventral plate. I possess four or five allied, undescribed species from various parts of South America; *C. curticorne*, Er., from the Amazons valley, is also a cognate species.

Banks of streams in dark places in the forest (*Champion*).

61. **Cryptobium ducale.** (Tab. XIII. fig. 18.)

Maximum, latum, supra planatum, nigerrimum, nitidum; capite sat elongato, cumque prothorace parce, fere grosse, punctato; elytris quadratis, fortiter et profunde punctatis.
Long. 20 millim. (mandibulis clausis).

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Third joint of the antennæ very elongate, quite twice as long as the second. Head very shining, black, with some very large punctures irregularly distributed, and more numerous minute punctures. Thorax polished, with about six large punctures forming an irregular series on each side of the middle, and a very few others at the sides. Elytra flat, not quite so long as they are conjointly broad, shining black, coarsely and closely but not densely punctured. Hind body shining black, only obsoletely punctured.

The unique example was found by beating the still attached withered leaves of a fallen tree in the dense forest; its sex is doubtful, but I think it may be a male, the

terminal ventral plate being slightly produced in the middle and sinuate at the sides behind, and its hind margin very feebly emarginate.

62. **Cryptobium grande.** (Tab. XIII. fig. 19.)

Nigrum, deplanatum; antennis rufis, scapo nigricante; capite brevi, lato, opaco; prothorace crebre fortiter punctato, utrinque ante basin depresso, inter depressiones elevato et polito; elytris quam prothorax paullo brevioribus, dense fortiter et profunde punctatis, subnitidis; abdomine apicem versus latiore.

Long. 14 millim.

Hab. Mexico, Cordova (*Sallé*).

This species is an ally of *C. gigas*, Sharp, but is readily distinguished by the coarse thoracic punctuation and the rather shorter elytra; the punctuation of the head is remote and subobsolete yet distinct. The male has a deep longitudinal depression on the last ventral plate; the margins of the depression are obscurely serrate, and its surface minutely granulose; its posterior part bears a large curved excision. The fourth and fifth segments on the upper surface show at the base a broad indefinite plica.

Three examples of this species are extant; a female is represented on our Plate.

63. **Cryptobium planatum.**

Latum, nigrum; capite prothoraceque opacis, obsolete punctatis, hoc linea mediali polita anterius minus arguta; elytris quadratis, dense et fortiter punctatis, nitidis.

Long. 15 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Mandibles very elongate; third joint of the antennæ distinctly longer than the rather elongate second joint. Head broad, slightly dilated behind the eyes, and very rounded behind, dull, finely and obsoletely punctate. Thorax narrower than the head, but little more than half as broad as the elytra, dull, with a polished narrow longitudinal space, which behind is somewhat raised, and near the front spreads out in an indefinite manner, forming a somewhat shining space; it is finely and obsoletely punctate. Elytra flat, not so long as conjointly broad, densely and coarsely punctate. Hind body obscurely red at the extremity.

Of this species one male was obtained by beating cut branches. The seventh segment beneath is furnished with a longitudinal depression, terminated in front by a short ridge of serration; the posterior part of the depression bears a notch, the sides of which are sinuate; the margins of the impression project minutely behind. The species is very closely allied to *C. gigas* and *C. maxillosum*; it differs from the former by the less opaque head, thorax, and elytra, and by the elytra being less densely punctate; from *C. maxillosum* by the absence of plicæ on the fourth and fifth segments.

64. **Cryptobium rostratum.** (Tab. XIII. fig. 22.)

Nigrum; antennis rufis, pedibus flavis, elytrorum margine apicali anguste rufescente; capite elytrisque dense

fortiter punctatis; prothorace nitido, ad latera crebre irregulariter fortiter punctato, medio longitudinaliter lævigato.
Long. 6 millim.

Hab. GUATEMALA, near the city, and San Gerónimo (*Champion*); PANAMA, Bugaba, David, San Miguel in the Pearl Islands (*Champion*).

Labrum with straight anterior margin, divided in the middle by a narrow definite notch, the angle on either side of which is very minutely prominent. Mandibles shorter than the head, each with two teeth. Antennæ with the scape elongate, equal to the five following joints united; joints 6–10 each a little shorter than the preceding one. Head not depressed, with convex eyes placed at the middle of the sides, rather coarsely and closely punctate, the punctuation extending nearly to the labrum. Thorax rounded at the front angles. Elytra very densely and rather deeply punctate, subrugose, but slightly shining. Hind body very finely punctured, dull.

The male has a deep rather narrow excision at the apex of the last ventral plate; the female is without positive sexual characters. The species is allied to the Amazonian *C. triste*, Sharp; though widely distributed in our region it is apparently not a common insect. It varies somewhat in the details of colour and punctuation: usually the hind margin of the wing-cases is picescent, or even more dilute in colour, and in some examples a considerable extent of the body is of this more dilute colour; the lateral punctuation of the thorax is sometimes divided so as to leave a more isolated and regular series of punctures on each side of the middle, and the head is in some examples not so densely punctured.

A darkly-coloured example of the female sex is represented on the Plate.

65. **Cryptobium aberrans.**

Rufulum, opacum; elytris nigris, capite superne abdomineque apicem versus nigricantibus, antennis in medio infuscatis, pedibus testaceis; capite anterius longiore, post oculos breviore, vertice subtruncato, obsolete punctato, anterius et in disco fere omnino impunctato sed haud nitido; prothorace minus gracili, elytris multo angustiore, lateribus leviter rotundatis, obsoletissime punctato, opaco; elytris quam prothorax paullo longioribus, omnium densissime fere obsolete punctatis, opacis; abdomine ante apicem testaceo-cingulato.
Long. 7 millim.

Hab. GUATEMALA, Paso Antonio 400 feet (*Champion*).

This is an aberrant species allied to the Amazonian *C. scrobiculatum*, Sharp, and with the labrum minutely denticulate on each side of the central incision in a manner similar to *C. rostratum*. Only a single example, without sexual marks, and presumably a female, has been obtained.

ABABACTUS.

Antennæ graciles, fractæ. Collum angustum. Labrum corneum, medio bispinosum, inter spinas divisum. Tarsi breviores, parum elongati, articulis 2°, 3°, 4° latitudine haud vel vix longioribus, articulo ultimo haud gracili, apicem versus crassiore, unguiculis parvis.

This genus is established for some small insects allied to *Cryptobium*, but differing in the structure of the labrum, mandibles, and tarsi; the structure of the last I look on as the most important diagnostic at present. From *Scopæodes* the genus is distinguished by the neck being of the ordinary structure, though narrow. The species at present placed in the genus by me belong to three groups, which will probably be found ultimately to be valid genera; in the first of these, which forms the type of *Ababactus*, the tooth in the middle of the mandible is deeply bidentate, the antennæ are less abruptly geniculate, the prosternum is short, and the general facies is as much that of *Lathrobium* or *Lithocharis* as of *Cryptobium*; *A. gracilis* and *A. filarius* have the mandibular tooth undivided, the spines of the labrum minute, the pseudo-terminal joint of the maxillary palpi remarkably short and stout, and the prosternum longer than in the first group; *A. politus*, which forms the third group, has a differently-shaped head, strongly geniculate antennæ, and the tooth of the mandibles single, and resembles *Scopæodes* in facies.

I am not acquainted with any species out of our region that I can refer to the genus. Mr. Champion informs me that all the species met with by him were found on the sandy banks of streams, beneath stones or dead leaves, and chiefly in the forest.

1. **Ababactus depressus.** (Tab. XIII. fig. 23.)

Fusco-piceus; capite prothoraceque nigricantibus, abdomine piceo-testaceo, antennarum basi apiceque rufis, pedibus testaceis; prothorace crebre subtiliter punctato, linea angusta longitudinali lævigata; elytris elongatis, dense subtiliter punctatis.
Long. $5\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet, Peña Blanca 3000 to 4000 feet (*Champion*).

Antennæ elongate, the scape about as long as the three following joints together; joints 3–8 dark, apical joints pallid. Head subquadrate, rather closely and finely punctate. Thorax not much longer than broad, curved at the sides. Elytra very much longer than the thorax, with close and fine but quite definite punctuation. The male has two circular impressions on the fourth ventral plate, and a rather small angular notch on the terminal plate.

The example figured was found on the Volcan de Chiriqui.

2. **Ababactus pennatus.**

Fuscus; antennis basi apiceque rufis, pedibus testaceis; prothorace obsolete punctato; elytris quam prothorax longioribus, crebrius subtiliter punctatis.
Long. $4\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Although very similar to *A. depressus* this is a much smaller insect, and has other good distinctive characters; the antennæ are less elongate, the penultimate joint being

but little longer than broad; the head is truncate behind, the hind angles a good deal less rounded, and the front of the thorax is also more truncate; the elytra are less elongate. The punctuation of the head and thorax is extremely indistinct. The unique example is in a bad state of preservation, and, having no notch on the last ventral plate, is presumably a female.

3. **Ababactus pallidus.**

Depressus, testaceus; antennis gracilibus, articulis tertio ad octavum subinfuscatis; capite crebre sat subtiliter punctato; prothorace parum elongato, subtiliter sat crebre punctato, medio longitudinaliter lævigato; elytris crebre subtilius punctatis, subnitidis.

Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ very slender, elongate. Head subquadrate, but with the hind angles much rounded. Elytra a little broader and considerably longer than the thorax. The male has on the under surface of the fourth ventral segment two excessively minute black fascicles placed each in a very small circle, and on the terminal segment a small excision.

Although closely allied to *A. depressus* this species is undoubtedly distinct, as besides being of a more pallid colour, it is rather broader, has much more slender antennæ, shorter elytra, and a rather less dense punctuation, especially on the thorax. Three examples were obtained.

4. **Ababactus gracilis.** (Tab. XIII. fig. 24.)

Sublinearis, testaceus, plus minusve infuscatus, nitidus, pedibus pallidis; capite prothoraceque parum punctatis, elytris sat crebre et fortiter punctatis.

Long. 4 millim.

Hab. GUATEMALA, Teleman in the Polochic valley (*Champion*).

Antennæ slender, moderately elongate; tenth joint a little longer than broad. Head narrow, suboval, somewhat sparingly but not finely punctate towards the front. Thorax very slender, only about half as broad as the elytra, very shining, obsoletely punctate, with a space along the middle impunctate. Elytra elongate and slender, rather darker in colour than the adjoining parts, somewhat coarsely punctate, shining, the punctuation behind obsolete. The male has a very minute circular depression on the middle of the fourth ventral segment, and a still more minute punctiform impression near the hind margin of the preceding segment; the terminal ventral plate has an elongate very narrow excision.

5. **Ababactus filarius.**

Sublinearis, rufus, prothorace elytrisque infuscatis; nitidus, pedibus pallidis; capite prothoraceque sat crebre et fortiter punctatis, hoc medio longitudinaliter lævigato; elytris elongatis, crebrius fortiter punctatis.

Long. 4 millim.

Hab. Panama, Tolé, San Feliz (*Champion*).

This species is very closely allied to *A. gracilis*, and is even of narrower form; but is, I think, distinct, the punctuation of the anterior parts being more evident, and that of the elytra distinctly denser, and not so obsolete behind; the thorax and elytra, moreover, are apparently of a darker colour.

The male characters are apparently similar to those of *A. gracilis*.

6. **Ababactus politus.** (Tab. XIII. fig. 25.)

Castaneo-testaceus, parce pubescens, nitidus, parum punctatus; capite posterius attenuato, haud truncato.
Long. 5 millim.

Hab. Guatemala (*Sallé*), near the city, Rio Naranjo 450 feet, Rio Maria Linda, and San Gerónimo (*Champion*).

Antennæ slender, strongly geniculate. Head narrowed behind the eyes to the neck, so that it is not at all truncate; very sparingly and indistinctly punctate. Thorax elongate and narrow, much narrowed from the middle to the front, sparingly and indistinctly punctate at the sides, impunctate along the middle. Elytra longer than the thorax, shining, feebly punctate at the base, impunctate at the extremity. Legs very pallid. The male has two minute circular impressions on the middle of the fourth ventral segment, and one on the segment preceding; the terminal plate bears a narrow, very elongate, angular emargination.

LATHROBIUM.

Lathrobium, Gravenhorst, Mon. p. 128; Erichson, Gen. et Spec. Staph. p. 588.

This extensive genus has now upwards of 150 described species, and though widely distributed is perhaps more characteristic of temperate than tropical regions; twenty-five species are, however, known from the Amazons valley, and between thirty and forty from America north of Mexico. Under these circumstances the paucity of species in our region appears remarkable, and I can scarcely accept it as final.

1. **Lathrobrium guatemalense.**

Parallelum, subdepressum, castaneo-testaceum; capite, prothorace elytrisque rufescentibus, pedibus testaceis; capite subquadrato, anterius nitido, basi utrinque densissime punctato, opaco; prothorace crebre fortiter punctato, medio longitudinaliter lævigato; elytris hoc paullo longioribus.
Long. 7 millim.

Hab. Guatemala, Torola 1000 feet (*Champion*).

Antennæ with each joint very slender at the base, second and third joints elongate, the latter a little the longer. Head obscure reddish in colour, as broad as the thorax, truncate behind, hind angles little rounded, in front shining, and there coarsely, irregularly, and distantly punctured; at each hind angle a large space quite opaque owing to

a dense confluent subobsolete punctuation. Thorax rather longer than broad, straight at the sides and scarcely narrowed behind, with numerous coarse punctures rather regularly distributed, except that there is a definite rather broad space along the middle impunctate. Elytra concolorous with the head and thorax, as broad as and slightly longer than the latter; the punctuation almost similar to that on the thorax, the pubescence scanty but distinct. Hind body unicolorous, more pallid than the anterior parts, densely and finely punctate.

The male has a deep, broad emargination with rounded front on the last ventral segment; the preceding plate is vaguely impressed along the middle, more distinctly at the base than behind, and the plate before it is also impressed.

This is allied to the Amazonian *L. parallelum*, Sharp, but is considerably smaller, and the male characters are very different. Only one example was obtained.

2. **Lathrobium mexicanum.** (Tab. XIV. fig. 1.)

Parallelum, testaceum, prothorace pallide rufo, capite nigricante; hoc oblongo, crebre fortiter punctato; illo crebre fortiter punctato, medio longitudinaliter lævigato; elytris seriatim subobsolete punctatis.

Long. $4\frac{3}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

Antennæ slender, the second and third joints elongate, the latter rather the longer. Head quite as broad as the thorax, coarsely and rather closely punctate, the punctures more distant on the disc, closer at the hind angles, where the surface is subopaque. Thorax longer than broad, the sides straight, a little narrowed behind; each side rather coarsely and numerously punctate, a broad space along the middle impunctate. Elytra a good deal longer than the thorax; their punctuation obsolete, especially behind, but regularly and serially arranged.

Of this species we have received but one example, a female: it is allied to the Amazonian *L. minor*, Sharp, but has a much coarser punctuation on the head.

3. **Lathrobium clandestinum.**

Parallelum, fusco-testaceum, capite prothoraceque nigris, elytris rufo-testaceis; capite suborbiculari, disperse fortiter punctato; prothorace crebrius fortiter punctato, medio longitudinaliter lævigato; elytris hoc haud longioribus.

Long. $7\frac{1}{2}$ millim.

Hab. GUATEMALA, Torola 1000 feet (*Champion*).

Antennæ infuscate red, the base more dilute; third joint longer than the second. Head black, very shining, scarcely so broad as the thorax, the hind angles rounded, coarsely punctate, the discoidal portion almost free from punctures. Thorax longer than broad, shining black, with numerous coarse punctures, a broad space along the middle impunctate. Elytra pallid red, shining, about as long as the thorax, with a rather sparing, moderately coarse but not very definite punctuation which at the base is sub-

serial in its arrangement. Hind body infuscate yellow, with the two apical segments more clearly yellow. Legs yellow, the tibiæ sordid.

Of this species also we have received but one female example. It does not appear to be very closely allied to any other; it differs from *L. guatemalense* in the shape of the head, which is less truncate behind, with the angles more rounded.

4. **Lathrobium relictum.**

Fulvo-testaceum, nitidum; capite minore, parce punctato; prothorace medio biseriatim punctato, utrinque crebre punctato; elytris hoc vix longioribus, seriatim punctatis.

Long. $4\frac{3}{4}$ millim.

Hab. MEXICO, Cordova (*Höge*); GUATEMALA, Dueñas (*Champion*).

Head rather small, with a few coarse punctures irregularly placed, most distinct in front. Thorax oblong, quite parallel-sided, with moderately numerous punctures at the sides, but with the dorsal series distinct from the lateral punctuation, these series widely separated. Elytra slightly longer than the thorax, the punctuation serial, the punctures rather large though shallow. Legs yellow.

This insect, though similar to the pallid variety of *L. dimidiatum*, will be readily distinguished by the more abundant punctuation on the thorax and wing-cases; only one female example was found in each locality.

5. **Lathrobium dimidiatum.**

Lathrobium dimidiatum, Say, Tr. Am. Phil. Soc. iv. p. 455 [1]; Leconte, Complete Writings of Thomas Say, ii. p. 570: Er. Gen. et Spec. Staph. p. 598 [2].

Lathrobium rufo-partitum, Fairm. et Germ. Ann. Soc. Ent. Fr. 1861, p. 436 [3].

Hab. NORTH AMERICA, United States [1 2].—GUATEMALA (*Sallé*), San Gerónimo, Champerico, Paso Antonio (*Champion*).—SOUTH AMERICA, Chili [3].

Var. Capite, prothorace, elytrisque testaceis.

Hab. MEXICO, Presidio (*Forrer*).

SCOPÆOMERUS.

Labrum bilobum, haud denticulatum. Caput collo angustissimo. Tarsi anteriores dilatati.

The little insects for which this genus is established have the appearance of *Scopæus* with rather less slender antennæ than usual. The structure of the labrum and front tarsi brings the genus near to *Lathrobium*, while the excessively slender neck is similar to that of *Scopæus*; the labrum is divided to the base by a very broad gentle excision, and I am unable to see any trace of denticulation. The penultimate joint of the maxillary palpus is short and much swollen as in *Scopæus*. The front femora are dilated, and the front tibiæ are moderately broad; the four dilated joints of the tarsus about equal in width. The posterior tarsi are moderately long and slender, the first

joint a good deal longer than the second, but much shorter than the terminal joint. The prosternum appears to be constructed in a similar manner to that of *Scopæus*. The mandibles are peculiar, consisting of a stout basal part which is bidentate, and an elongate slender apical portion.

All four species were found on the shady banks of streams, beneath decaying leaves.

1. **Scopæomerus chiriquensis.** (Tab. XIV. fig. 2.)

Elongatus, angustatus, parallelus, omnino subtilissime punctulatus, fuscus, antennis rufis, pedibus elytrisque testaceis, his ad apicem et circa suturam fuscescentibus.
Long. 4 millim.

Hab. Panama, Volcæn de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ rather stout; first joint thick, not equal to the three following ones in length, the third joint a good deal longer than the second, the tenth about as long as broad. Head oblong, with the eyes a little prominent, very finely and densely punctured, dull. Thorax slightly longer than broad, a little narrowed behind, the punctuation even more indistinct than that of the head. Elytra a good deal longer than the thorax, extremely finely and indistinctly punctured. The male has the penultimate ventral segment broadly but feebly impressed on the middle, while the terminal segment bears an elongate very narrow excision.

The unique example is no doubt immature.

2. **Scopæomerus guatemalenus.**

Angustulus, subparallelus, omnino subtilissime vix visibiliter punctulatus, rufus, capite elytrisque fuscis, his circa humeros vage flavescentibus, antennis pedibusque testaceis.
Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, near the city (*Champion*).

This insect appears to be very closely allied to *S. chiriquensis*, but is a smaller insect, with much feebler antennæ; the oblong head is distinctly emarginate behind. A single female only has been obtained.

3. **Scopæomerus palmatus.**

Angustulus, subparallelus, omnino subtilissime vix visibiliter punctulatus, rufescens, supra fuscescens, elytris circa humeros, pedibus antennisque testaceis, his medio fuscescentibus; capite oblongo, angulis posterioribus rotundatis.
Long. $3\frac{1}{2}$ millim.

Hab. Panama, Bugaba, San Feliz (*Champion*).

This species is very closely allied to *S. guatemalenus*, but has a rather broader head, with more rounded hind angles, and the middle joints of the antennæ infuscate. The male has a slight broad depression on the middle of the terminal portion of the penultimate ventral segment, and a deep very narrow excision on the terminal segment.

4. Scopæomerus obscurus.

Angustulus, subparallelus, subtilissime punctulatus, subopacus, fusco-rufus, supra fuscus, elytris ad basin rufescentibus, antennis rufis, pedibus testaceis; capite oblongo, angulis posterioribus rotundatis.
Long. 3 millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This insect has the punctuation very fine, but not quite so indistinct as in the preceding species, and there is no flavous colour on the elytra, though their base is indefinitely rufescent. The antennæ are rather slender and quite immaculate. The elytra are considerably longer than the thorax, very densely punctate. The male characters are apparently similar to those of *S. palmatus*. A single example in bad preservation.

SCOPÆUS.

Scopæus, Erichson, Gen. et Spec. Staph. p. 604.

This is a very widely distributed genus, occurring in nearly all the geographical faunistic regions, but is not yet very numerous in species, only about sixty being described. They are minute insects, the genus containing in fact the smallest forms of the Pæderinæ; the species greatly resemble one another, but present in many cases very remarkable sexual characters in their males, and the œdeagus exhibits much variety of form. I have arranged the twenty species of our region in four groups: those of the first group are very similar to what we are familiar with in the European representatives of the genus; those of the other three groups have a different appearance, and their longer legs indicate their probable possession of superior cursorial activity; I do not however, at present, see any characters by which they can be generically separated.

These insects are found upon the sandy banks of streams, beneath stones or decaying leaves (*Champion*).

§ 1. *Tarsi short; surface of the body minutely punctulate, not shining; anterior angles of the thorax quite indistinct.*

1. Scopæus ligulifer.

Subparallelus, fuscus, antennis pedibusque testaceis; densissime subtiliter punctatus, opacus; capite subquadrato, posterius leviter emarginato.
Long. vix 3 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ rather slender, not thicker externally, the terminal joints paler, the middle joints being slightly infuscate, the penultimate joint about as long as broad. Head very densely and finely punctured, quite dull, the hind angles but little rounded. Thorax broad, about as wide as the head and elytra, not much rounded at the sides, densely

and finely punctured, without smooth line or basal depressions, slightly shining. Elytra slightly longer than the thorax, finely and excessively densely punctured, quite dull. Legs yellow.

The male of this obscure insect has a most extraordinary sexual character, the penultimate ventral plate being deeply and broadly excised quite to its base, and from the middle of the excision there projects backwards a long slender ligula, which attains the extremity of the body, and is there acuminate and curved upwards, appearing something like a sting. A single example of each sex.

2. **Scopæus latitarsis.**

Latiusculus, subtilissime punctulatus, subopacus, rufescens, elytris fuscescentibus; tarsis omnibus brevibus, latis, anterioribus subdilatatis.

Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ rather long, the penultimate joint about as long as broad. Head broad, subquadrate, the vertex emarginate, the hind angles but little rounded, the surface excessively finely punctate, not shining. Thorax broad, much rounded at the sides, like the head excessively finely punctate, scarcely visibly impressed on either side at the base. Elytra rather elongate, a good deal longer than the thorax, like the head and thorax very finely punctate but darker in colour. Front tarsi short, slightly dilated; the other feet with the terminal joint stout, so that the tarsus has the appearance of being almost broader at the extremity than at the base.

Only a single example has been met with; it is a female, in a very decayed condition, so that it will not bear much manipulation after being unmounted. Although it no doubt approaches the genus *Scopæomerus*, it certainly cannot be placed there, as the front tarsi are scarcely at all dilated, and the labrum appears to be bidenticulate; probably the species may prove to be allied structurally to the Amazonian *S. tarsalis*, Sharp.

3. **Scopæus vilis.**

Subparallelus, subtilissime punctulatus, subopacus, pallidus, rufescens, antennis pedibusque testaceis; capite subquadrato, posterius leviter emarginato.

Long. 3 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ rather long and slender; third joint scarcely so long as the second, about equal to the fourth, the tenth joint about as long as broad. Head about as broad as the elytra, straight at the sides, the hind angles a little rounded, the vertex distinctly emarginate in the middle, the surface excessively finely punctate, almost dull. Thorax rather broad, scarcely narrower than the head, much rounded at the sides, with a feeble but elongate depression on either side of the middle at the base. Elytra elongate, longer than the thorax, similarly coloured and punctate. The male has two almost

contiguous tubercular prominences on the hind margin of the penultimate ventral plate, and the terminal plate broadly and angularly excised. One example.

4. **Scopæus apicicornis.**

Angustulus, subparallelus, testaceus, antennarum articulis duobus ultimis fuscescentibus, dense subtilissime punctatus, subopacus; capite oblongo; tarsis brevissimis.
Long. $3\frac{1}{8}$ millim.

Hab. GUATEMALA, Rio Naranjo 450 feet (*Champion*).

Antennæ slender, so that each of the joints is longer than broad. Head oblong, densely and extremely finely punctured, pubescent, slightly shining, the hind angles but little rounded, the vertex feebly emarginate. Thorax broad, scarcely longer than wide, a good deal narrowed behind, very finely punctured, rather shining, with faint traces of a fine subcarinate line along the middle. Elytra longer than the thorax, very finely punctured, not quite dull. The unique example is a female.

5. **Scopæus filum.**

Elongatus, angustior, depressus, subtilissime punctulatus, testaceus, antennis abdomineque plus minusve fusco tinctis.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

Antennæ small and slender, the joints from about the fourth onwards more or less slightly infuscate, the apical joint or two being perceptibly paler. Head narrow, oblong, almost straight behind, very finely densely punctate, dull. Thorax only very slightly narrowed behind, elongate, suboblong, its front part not much produced, very minutely punctate. Elytra rather longer than the thorax, and of a slightly darker yellow colour, with a feeble appearance of infuscation; very minutely punctate, dull. Hind body distinctly narrowed towards the base; the dorsal aspect, at any rate, always infuscate. The male has a slight broad emargination of the last ventral plate, and from it there projects a short broad ligula which is emarginate at the tip. The small series of examples does not exhibit any variation.

6. **Scopæus concolor.**

Elongatus, angustior, depressus, subtilissime punctulatus, testaceus, subopacus.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo, Chacoj (*Champion*), Yzabal (*Sallé*).

This species can scarcely be distinguished from *S. filum*, except by the uniformly pallid colour; the male characters are, however, very different, and are indeed very slight, there being merely a slight emargination of the last ventral plate. Ten examples were obtained. The example from Yzabal is in a very bad state of preservation, and its determination as this species is not very certain.

7. **Scopæus salvini.** (Tab. XIV. fig. 4.)

Angustulus, rufo-testaceus; pectore abdomineque fuscis, elytris basin versus fuscescentibus, antennis pedibusque testaceis; capite anterius subangustato; prothorace omnino vix visibiliter punctato, subopaco.
Long. $2\frac{1}{4}$ millim.

Hab. Guatemala, near the city, San Gerónimo, Paraiso (*Champion*); Panama, Los Remedios, San Lorenzo (*Champion*).

Antennæ short, entirely yellow, joints 5–10 each not so long as broad. Head narrow, very slightly narrowed in front, the vertex scarcely emarginate, the sides a little curved near the hind angles, densely, excessively finely punctate. Thorax suboblong, rather bright yellow, scarcely perceptibly punctate. Elytra longer than the thorax, finely punctate, broadly fuscescent at the base. The male has a rather small emargination of the last ventral plate.

Although this species has externally the appearance of being very closely allied to *S. concolor*, the œdeagus of the two species is very different; it terminates in this species in a long slender point like a wasp's sting, whereas in *S. concolor* the termination is truncate, with two short angular processes which are probably articulated and mobile.

8. **Scopæus obscurus.**

Angustulus, niger; antennis pedibusque testaceis, illis medio vix obscuratis; subtilissime punctulatus, prothorace subnitido.
Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, El Tumbador 2500 feet, Zapote (*Champion*).

Though differing very greatly in colour from *S. salvini*, this insect, in respect of form, size, and sculpture, is extremely similar thereto. The male characters externally are scarcely perceptible, but the œdeagus bears no resemblance to that of *S. salvini*; it is more similar to that of *S. concolor*; it is, however, of more elongate form, with a more dilated apex. Eight examples were found at El Tumbador, and one at Zapote.

9. **Scopæus piceolus.**

Elongatus, angustulus, subparallelus, subtilissime punctatus, subopacus, picescens; pedibus testaceis, elytris ad suturam vage obscureque rufescentibus.
Long. 3 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

This insect is excessively similar, except in colour, to *S. concolor*, but being dark it more resembles *S. obscurus*. *S. piceolus* will, I think, be recognized by the dark elytra being obscurely rufescent along the suture, and I have therefore ventured to give it a name. We have received only two female examples, and in one of them the antennæ are fuscous; this may be due to decay, as these organs are yellow in the other example.

10. **Scopæus brevipennis.**

Elongatus, angustulus; capite, prothorace elytrisque ferrugineis, abdomine nigricante; prothorace elongato, suboblongo, elytris hoc fere brevioribus.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Head elongate, subcordate, the vertex being emarginate, the eyes rather small, the surface extremely minutely and densely punctulate, almost dull. Antennæ yellow, moderately stout, the penultimate joint about as long as broad. Thorax red, shining, almost impunctate, nearly straight at the sides, and scarcely narrowed behind, much longer than broad. Elytra almost shorter and no broader than the thorax, very slightly narrowed at the shoulders, their punctuation excessively minute, almost imperceptible.

Although we have received only one example of this species, and that in such decayed condition that it has entirely lost the legs, yet as the short elytra render it easy of recognition, I have described it.

11. **Scopæus umbra.**

Angustissimus, depressus, omnino subtilissime vix visibiliter punctulatus, testaceus, subopacus; capite elongato, oblongo, oculis minutis.
Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Pantaleon 1700 feet (*Champion*).

Antennæ small, not thicker externally, joints 2–10 differing very little from one another. Head narrow and elongate, parallel, the vertex a little emarginate; eyes minute, punctiform; neck excessively minute. Thorax elongate and slender, much longer than broad, scarcely curved at the sides, not visibly punctate, feebly shining. Elytra long and narrow, a little longer than the thorax, their punctuation almost imperceptible.

Of this fragile and minute creature only one example was obtained.

§ 2. *Tarsi short; surface polished; anterior angles of the thorax less obsolete.*

12. **Scopæus dissimilis.** (Tab. XVI. fig. 5.).

Subdepressus, nitidus, rufescens; antennis pedibusque testaceis, prothorace elytrisque fusco-rufis, his apicem versus flavescentibus, abdomine nigricante.
Long. $2\frac{1}{4}$ millim.

Hab. PANAMA, Bugaba, San Miguel in the Pearl Islands (*Champion*).

Head subquadrate, the vertex emarginate; shining, almost impunctate. Antennæ yellow-red, the penultimate joint scarcely so long as broad. Thorax broad, scarcely longer than wide, a little narrowed behind; shining and impunctate. Elytra longer than the thorax, shining and almost impunctate, piceous, broadly flavescent behind. Hind body a good deal narrowed at the base, blackish, the hind margins of the two last segments testaceous. Legs short, clear yellow.

Four examples were met with of this small insect; they are in very decayed condition. The species is like no other known to me. The polished surface, short legs, and comparatively broad thorax are diagnostic.

§ 3. *Tarsi longer; elytra densely punctulate.*

13. **Scopæus antoniensis.** (Tab. XIV. fig. 6.)

Fusco-niger; antennis pedibusque testaceis, illarum basi, horum tibiis geniculisque infuscatis; elytrorum margine apicali flavo; capite latiusculo, posterius rotundato.
Long. 4 millim.

Hab. GUATEMALA, Paso Antonio, Torola (*Champion*).

Antennæ rather long, the four or five basal joints infuscate, the basal joint nearly as long as the three following together, the third joint not quite so large as the second, the penultimate joint about as long as broad. Head convex, the hind angles much rounded, the vertex not emarginate; surface excessively finely, in fact almost invisibly, punctate and pubescent, moderately shining. Thorax ovate, much narrowed behind, punctate like the head, with only obsolete traces of a plica at the base in the middle. Elytra slender, about as long as the thorax, very finely and densely punctured, dull, their punctuation much more distinct than that of the head and thorax. Hind body a good deal narrower towards the base. The colour of the under surface is paler, fuscous red. The male has a broad not very deep sinuous emargination of the last ventral segment, and a very slight emargination of the preceding segment, the more basal segments being slightly flattened in the middle of each. A single example was found at Torola, and a small series at Paso Antonio.

14. **Scopæus mollis.**

Rufescens, capite prothoraceque fuscescentibus, elytris nigricantibus margine apicali flavo, antennis pedibusque pallide flavis; capite prothoraceque fere invisibiliter punctulatis, sat nitidis; elytris omnino densissime punctatis, opacis.
Long. 4 millim.

Hab. GUATEMALA, Champerico (*Champion*).

This insect is closely allied to *S. antoniensis*, but in addition to the more pallid colour differs in other details, the most important of which is the extremely dense and even punctuation of the elytra, rendering these parts quite dull, and the broader extent of the pallid colour at their hind margin. The Amazonian *S. ornatus*, Sharp, is extremely close to this, but is a broader insect with more rounded sides to the thorax. Only two examples were procured, and they are both females.

15. **Scopæus carissimus.**

Niger, tibiis tarsisque testaceis, antennis fusco-rufis; sat nitidus, elytris omnino peropacis, margine apicali flavo.
Long. 3½ millim.

Hab. Guatemala, Rio Naranjo 450 feet (*Champion*).

Antennæ a little thickened externally; second and third joints equal, the penultimate joints transverse. Head oblong, the vertex a little emarginate; surface extremely finely punctate, only slightly shining. Thorax suboblong, minutely punctate, more shining than the head. Elytra excessively densely punctate, so as to be quite dull; black, the basal portion with a griseous pubescence, the hind margin rather broadly yellow. Femora blackish, the tibiæ and tarsi pallid yellow. The unique example of this very distinct species is a male, and has a deep excision of the terminal ventral segment, a very slight excision of the preceding segment, and on the three more basal segments a transverse shining space, depressed, but with the front margin somewhat carinate.

§ 4. *Tarsi longer; surface of the body, including the elytra, polished.*

16. **Scopæus politus.** (Tab. XIV. fig. 8.)

Elongatus, haud depressus, politus, nitidus, fere impunctatus, rufo-testaceus; elytris fusco-nigris, abdomine apice nigricante, pedibus pallide flavis; antennis articulis quarto ad sextum interdum infuscatis.
Long. $3\frac{1}{2}$ millim.

Hab. Guatemala (*Sallé*), near the city, San Gerónimo, El Jicaro, Rio Naranjo (*Champion*).

Antennæ not quite so long as the head and thorax, a little thickened externally, the third joint nearly as long as the second, the penultimate joint not quite so long as broad. Head suboval, convex, the eyes prominent, a little narrowed behind, the hind angles rounded, the vertex not emarginate; surface impunctate, with a scanty, not short, depressed pubescence. Thorax considerably longer than broad, a little narrowed behind, and still more strongly in front, shining and impunctate. Elytra scarcely longer than the thorax, blackish, obscurely rufescent about the suture. Hind body very finely punctate, the terminal segments blackish. Legs clear pale yellow. The male has a broad rather shallow excision of the hind margin of the last ventral plate.

The small series of this species exhibits some variation in the colour of the elytra, the fuscous coloration being sometimes so much reduced that these parts are nearly entirely pale with an infuscation near the apical angle; this is especially the case in the examples from the Rio Naranjo. One or two of the specimens are intermediate.

17. **Scopæus discoidalis.**

Haud depressus, politus, nitidus, fere impunctatus, testaceus; elytris oblique nigricantibus, sutura, apice basique dilutioribus, abdominis apice nigricante.
Long. $2\frac{7}{8}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*); Nicaragua, Chinandega (*Sallé*).

Antennæ rather short, thickened externally, the penultimate joint strongly transverse. Thorax oblong oval, not elongate. Elytra very sparingly punctate.

This species is considerably smaller than *S. politus*, and has a less slender and elongate thorax, and the dark colour on the wing-cases leaves the hind margin pale.

Mr. Champion procured a series of a dozen examples, all of which agree very closely, as do also the two exponents from Nicaragua.

18. **Scopæus filitarsis.**

Elongatus, haud depressus, politus, nitidus, rufo-testaceus; elytris plaga fuscescente, ad marginem apicalem pallidis; tarsis posterioribus tenuioribus.

Long. $3\frac{1}{8}$ millim.

Hab. MEXICO, Vera Cruz (*Höge*); GUATEMALA, Champerico (*Champion*).

This insect is very closely allied to *S. politus*, from which it differs by the more slender hind tarsi, and the fact that the fuscescent patch on the elytra leaves the hind margin pale; this is also the case in *S. discoidalis*, but that species has the head and thorax less elongate, and the legs less elongate, with comparatively thicker hind tarsi.

The six examples from Guatemala agree closely; but the two from Mexico are of rather larger size, and may not perhaps be the same species, though I cannot at present detect any other distinctive character.

19. **Scopæus apicipennis.** (Tab. XIV. fig. 7.)

Elongatus, haud depressus, politus, nitidus, fere impunctatus, fusco-rufus; elytris nigris, angulo apicali externo flavo-guttato; femoribus fuscis, tibiis tarsisque testaceis; abdomine dimidio apicali nigricante.

Long. $3\frac{1}{8}$ millim.

Hab. GUATEMALA, near the city, San Gerónimo, Panajachel, Coatepeque (*Champion*); PANAMA, San Feliz (*Champion*).

Antennæ rather slender, very slightly thicker externally, the penultimate joint scarcely so long as broad. Head black or dark red, more or less infuscate, very shining, a little narrowed behind, the eyes prominent. Thorax elongate, much narrowed behind and still more strongly in front, the colour scarcely so dark as that of the head. Elytra shining black, longer than the thorax, with a definite pallid yellow mark at the outer angle extending inwards but not quite reaching the suture. Basal segments of the hind body infuscate red, with griseous pubescence; the apical segments nearly black. This species is very closely allied to *S. politus*, though readily distinguished by the differences in colour. The Colombian *S. pulchellus* has, according to Erichson's description, a similar coloration, except that the legs are entirely pallid; and the thorax is said to be more narrowed behind than in front.

The examples procured are not numerous, and vary a little in the colour of the femora, and in the red parts of the body being more or less tinted with piceous or fuscous colour.

20. **Scopæus delicatulus.**

Haud depressus, politus, nitidus, rufo-piceus; pedibus pallide flavis; elytris nigris, angulo apicali externo minute flavo-guttato; antennis testaceis; abdomine dimidio apicali nigro.
Long. 3 millim.

Hab. GUATEMALA, El Jicaro (*Champion*); PANAMA, San Miguel in the Pearl Islands (*Champion*).

This insect is very similar to *S. apicipennis*, but is smaller, and has the head and thorax less elongate, and the apical pale spot of the elytra more minute. In some examples the legs are entirely pallid yellow, in others the femora are a little infuscate at the extremity.

The unique example from Guatemala is a variety of rather paler colour. The eight examples from the State of Panama exhibit but little variation.

EUSCOPÆUS.

Labrum longius bispinosum, medio fere ad basin exciso. Mandibulæ sat elongatæ, tantum minute denticulatæ, quasi serratæ. Caput collo angustissimo. Tarsi breves, robusti, articulo ultimo præsertim lato.

These insects are allied to *Scopæus*, but are of rather broader and heavier build; and the very long teeth in the middle of the labrum, in conjunction with the peculiar minute teeth of the mandibles, seem to me to render it necessary to treat them as a genus distinct from *Scopæus*; the latter character is not to be found in any of the allied genera so far as I have been able to observe.

Same habits as *Scopæus* (*Champion*).

1. **Euscopæus crassitarsis.**

Haud depressus, robustus, brunneus, pedibus testaceis; omnium subtilissime vix perspicue punctulatus; tarsis latis.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ rather slender, the penultimate joint as long as broad. Head broad, convex, slightly narrowed in front, the hind angles much rounded; surface excessively minutely and indistinctly punctate and pubescent, not shining. Thorax broad, but rather longer than wide, subovate, much narrowed in front, almost impunctate. Elytra longer than the thorax, finely and not densely punctate, shining. Hind body broad, narrower towards the base. Front tarsi thick; terminal joint of all the tarsi very stout. The male has a large and deep emargination of the last ventral plate. One example.

2. **Euscopæus gracilicornis.** (Tab. XIV. fig. 9.)

Haud depressus, brunneus, pedibus pallide flavis; omnium subtilissime vix perspicue punctulatus; labro longius bispinoso.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Paraiso, San Gerónimo (*Champion*).

This species is not of such robust build as *E. crassitarsis*, and has the antennæ and tarsi more slender, and the spines of the labrum longer. The male has a broad and deep angular excision of the last ventral segment, and a quadrate depression on the middle of the terminal part of the preceding segment, the hind margin being also feebly emarginate; the three preceding segments are also very slightly impressed. Two examples. Our figure represents the one found at San Gerónimo; it is rather immature.

ORUS.

Orus, Casey, Contributions to the descriptive and systematic Coleopterology of N. Amer. part ii. p. 136 (1884).

This genus has recently been established for two Californian species, and I now add one from our region. It comes very near to *Scopæus*, but is well distinguished by the fact that the neck is not so excessively slender as it is in that genus, and the whole build is correlatively more compact.

1. **Orus guatemalenus.** (Tab. XIV. fig. 3.)

Elongatus, angustulus, piceus, antennis pedibusque testaceis; capite dense subtilissime punctato, subopaco; prothorace parcius punctato, medio area lata lævigata.

Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, Dueñas, San Gerónimo (*Champion*).

Antennæ rather short and stout, the third joint rather shorter than the second, the penultimate joints distinctly transverse. Head very finely punctate and pubescent. Thorax longer than broad, extremely finely and not densely punctate, shining, and with a broad impunctate space along the middle. Elytra rather longer than the thorax, obsoletely punctate, subopaque. The male has the apical portion of the penultimate ventral segment deeply and broadly impressed along the middle, the depression being smooth and shining, and produced on each side so as to form a rather long lacinia; the terminal segment bears a deep, narrow, parallel-sided excision. Five examples.

LITHOCHARIS.

Lithocharis, Boisduval et Lacordaire, Faun. Ent. Paris, p. 431 (1835); Er. Gen. et Spec. Staph. p. 610; Rey, Pédériens, p. 172.

This genus will in future comprise only a small proportion of the very numerous forms that have been hitherto assigned to it. Rey and others have already separated the greater number of the European species under the generic name of *Medon*, and it appears that this is clearly a necessary course. In addition to the characters hitherto pointed out as distinctive of *Medon*, I find there exists another of great importance, viz. that the prosternum above the front coxæ is prolonged to form a process resting on

the front of the mesosternum. This character appears to me of primary importance in the classification of the genera hitherto associated under the name of *Lithocharis*, and to it I would subordinate the structure of the labrum, the width of the neck, the dilatation of the front tarsi, the relative proportions of the joints of the hind tarsus, and the structure of the fourth joint of this latter organ. By so doing a series of very natural genera is obtained; while, on the other hand, if this be not attended to, it will be found impossible to separate *Lithocharis* from the genera near *Lathrobium* at the one extremity, and those near *Sunius* at the other. *Lithocharis* then will be specially characterized by the small development of the supra-coxal process and the side pieces of the prosternum, by the quite slender neck, the undilated front tarsi, the four basal joints of the hind tarsi decreasing gradually in length, the fourth joint being simple in structure and interposed in the normal manner between the third and the fifth. The genus is represented in the warmer regions of Asia and America, and one species has been distributed by commerce so as to be nearly cosmopolitan.

Most of the species obtained by Mr. Champion were found on the sandy banks of streams.

1. **Lithocharis mendax.**

Fusca, opaca; capite prothoraceque opacis, subquadratis, omnium subtilissime invisibiliter punctatis, hoc medio linea subobsoleta lævigata; elytris quam prothorax paullo longioribus, dense subtilissime rugulose punctatis, margine apicali sæpe parum distincte pallidiore; antennis rufis; pedibus sordide testaceis.

Long. $4\frac{1}{4}$ millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, David, San Feliz, Tolé (*Champion*).—SOUTH AMERICA, Colombia (*coll. Chevrolat*).

Antennæ moderately long, not at all thicker externally, the tenth joint as long as broad. Head just as broad as the thorax, rather large, straight at the sides. Thorax not quite so long as broad, its medial line not raised. In the male there is a broad shallow emargination of the last ventral plate.

This insect is very similar to *L. diffinis*, Sharp, but the punctuation of the thorax is still finer and more imperceptible, and the male has a distinct though slight emargination of the last ventral plate. The species was called *L. limbata*, Er., in Chevrolat's collection, but from the description it cannot be that insect.

2. **Lithocharis limbata.**

Lithocharis limbata, Er. Gen. et Spec. Staph. p. 621 [1].

Hab. GUATEMALA, near the city, Aceytuno (*Champion*); PANAMA, David (*Champion*).—SOUTH AMERICA, Colombia [1].

I refer with some hesitation these examples to Erichson's species, but the male has the hind margin of the last ventral plate nearly truncate, and thus differs from *L. mendax*. *L. diffinis* is considerably smaller, and has the elytra infuscate behind. On the other

hand the Amazonian *L. sobrina*, Sharp, may possibly prove to be only a variety of *L. limbata*. The species of this immediate group are very similar to one another, and an examination of the œdeagus will be required before they can be satisfactorily determined.

3. **Lithocharis hilaris.** (Tab. XIV. fig. 11.)

Fusco-rufa; capite nigro; elytris abdomineque fuscis, his apicem versus argute testaceis; prothorace antennisque rufis; pedibus flavo-testaceis.
Long. 5 millim.

Hab. GUATEMALA, near the city, Torola, Zapote, Paso Antonio, San Gerónimo, Cubilguitz, Lanquin (*Champion*); PANAMA, David, Tolé (*Champion*).

Antennæ rather stout, red, slightly clouded in the middle, the tenth joint as long as broad. Head rather large, subquadrate, black, shining. Thorax nearly as long as broad, the sides a little narrowed behind, the front margin on either side rather strongly oblique; the surface closely and finely punctate, with a smooth line along the middle indistinct in front, but broader behind. Elytra densely and finely punctate, nearly black, with the hind part yellow; longer than the thorax. In the male there is a feeble emargination of the last ventral plate.

4. **Lithocharis discoidalis.**

Fusca; capite prothoraceque nigricantibus; elytris testaceis, apice pallidiore, disco late infuscato; antennis pedibusque testaceis, illis brevibus apicem versus leviter incrassatis, articulis penultimis transversis.
Long. 4½ millim.

Hab. PANAMA, Bugaba (*Champion*).

This insect is very closely allied to *L. ochracea*, but is readily distinguished from it and the other allied species by the structure of the antennæ; the colour of the thorax and elytra also is different from *L. ochracea*. The antennæ are not so long as the head and thorax, and are clear, pale red; they are very slightly thickened towards the extremity, and the penultimate four joints are each distinctly shorter than long. The head is quite as broad as the thorax, larger than in *L. ochracea*, very densely and finely punctate. The thorax is subquadrate, dull, very densely and finely punctate, with a fine smooth line along the middle. The elytra are more coarsely punctate than in *L. ochracea*, and their yellow colour is pallid at the apex, the disc being broadly infuscate. Only two examples were obtained, both apparently females.

5. **Lithocharis ochracea.**

Pæderus ochraceus, Grav. Micr. p. 59 [1].
Lithocharis ochracea, Er. Gen. et Spec. Staph. p. 623 [2].

Hab. NORTH AMERICA.—GUATEMALA, near the city, Dueñas, Zapote (*Champion*).—SOUTH AMERICA [2].—ANTILLES [2].—EUROPE [1].

6. **Lithocharis infuscata.**

Lithocharis infuscata, Er. Gen. et Spec. Staph. p. 622 [1].

Hab. MEXICO, Teapa (*Chevrolat*); GUATEMALA, near the city, Las Mercedes, El Reposo, Teleman (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).—SOUTH AMERICA, Colombia [1].

7. **Lithocharis alticola.**

Tenuis, fusca; capite nigricante, omnium dense subtilissime punctato, opaco; elytris quam prothorax fere longioribus.

Long. 4 millim.

Hab. GUATEMALA, Quiche mountains 7000 to 9000 feet (*Champion*).

Antennæ slender, the penultimate joint as long as broad. Head small, a little narrowed in front. Thorax elongate, rather longer than broad, densely punctate, without carina. Elytra scarcely so long as the thorax.

This is a distinct little species, of which six examples were obtained; they are all in a bad state of preservation.

ADEROCHARIS.

Corpus latum, depressum, densissime punctatum. Caput quadratum, collo sat lato. Tarsi anteriores dilatati. Prosterni processus parum productus, epimeris inter sese valde distantibus. Tarsi posteriores evidenter quinque-articulati, articulo basali quam secundus multo longiore.

This genus is distinct from *Lithocharis* by the comparatively broad neck and the dilated front tarsi, while from *Medon* it departs by the smaller development of the pieces contiguous with the front coxæ. The maxillary palpi are elongate, the terminal joint very minute, being excessively slender as well as short; the labrum is large, obscurely unidentate in the middle.

The genus has a wide distribution in the New World, as it will comprise the North-American *L. corticina*, Grav., as well as the South-American *L. hepatica*, Er., and the species here described. The Eastern *L. staphylinoides*, Kr., with a similar facies, will form another new genus.

Same habits as *Scopæus* (*Champion*).

1. **Aderocharis latro.** (Tab. XIV. fig. 10.)

Lithocharis latro, Sharp, Tr. Ent. Soc. Lond. 1876, p. 255 [1].

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, near the city, San Isidro, Coatepeque, Zapote, San Gerónimo (*Champion*); PANAMA, Bugaba, David (*Champion*).—SOUTH AMERICA, Amazons valley [1], Rio Janeiro [1].

Mr. Champion procured a good series of this species near the city of Guatemala, but from each of the other localities we have only one or two examples. The specimens agree closely, except that those from the State of Panama are smaller, agreeing in this

respect with my original individual from the Amazons valley: the larger examples from our region agree with specimens from Rio Janeiro which I formerly thought might be distinct; but I find they all agree in the structure of the œdeagus, and in this respect differ completely from the North-American *Lithocharis corticina*, Grav., though in other respects the two species are very similar. A Mexican example is extant in Chevrolat's collection under the name *L. fuscipennis*, Chevr., and this was considered by Fauvel to be *L. hepatica*, Er.; Erichson's description indicates, however, a much smaller insect, with the head less emarginate behind than it is in *A. latro*.

2. **Aderocharis furtiva.**

Latiuscula, subdepressa, opaca, densissime subtilissime punctulata, fuscula; antennis, prothorace elytrisque ferrugineis, his interne subinfuscatis; pedibus testaceis; capite subquadrato, posterius truncato, angulis posterioribus haud rotundatis.

Long. 7 millim.

Hab. MEXICO, Oaxaca (*Höge*); GUATEMALA, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, David (*Champion*).

This insect is closely allied to *A. latro*, but does not attain the size of the smallest examples of that species, and has the thorax more pallid in colour; the head is more quadrate, being scarcely perceptibly emarginate behind; the front of the thorax on either side is less oblique, that is to say, the front margin is nearly rectilinear in form; and the male characters are very different, the penultimate ventral segment having the hind margin straight and bearing a few fine long black hairs on either side, the terminal segment being very broadly emarginate. The œdeagus is very different from that of *A. latro*.

A fine series of over forty examples, showing no variation, was procured at San Gerónimo, but we have only two Mexican specimens; from Nicaragua and the State of Panama we have only unique exponents, which may possibly be distinct. The North-American *L. corticina*, Grav., is no doubt closely allied, but has the head deeply emarginate behind; and I find, moreover, that the œdeagus is so different as to leave no room for doubt as to its being perfectly distinct from *A. furtiva*.

3. **Aderocharis sagax.**

Latiuscula, subdepressa, opaca, densissime subtilissime punctulata, sordide rufa, pedibus testaceis; capite subquadrato, posterius emarginato.

Long. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

This species also is a large *Aderocharis*, extremely closely allied to *A. latro*, but, so far as I can judge from the two examples, more pallid in colour, and with a curious difference in the male characters; in that sex the hind margin of the penultimate ventral plate is armed with four angular teeth, and the next segment is less deeply emarginate.

DACNOCHILUS.

Dacnochilus, Leconte, New Sp. N. Am. Col. part 1, p. 47 (1863); Solsky, Hor. Soc. Ent. Ross. v. p. 142, t. 4.

This, apparently, is a Central-American genus, whose only species extends its range to the Southern States of the North-American Union.

The genus belongs to the division in which the prosternum above the coxæ is not prolonged; it should be placed near *Aderocharis*. The mandibles have each, about the middle, two rather long definite teeth.

1. **Dacnochilus lætus.** (Tab. XIV. fig. 12.)

Dacnochilus lætus, Lec. loc. cit. p. 47[1].

Hab. North America, South Carolina, Louisiana[1] (*coll. Chevrolat*).—Mexico (*Truqui*), Jalapa (*Flohr*, *Höge*), Cuantla, Yautepec (*Flohr*), Cordova (*Sallé*), Tehuacan, Cerro de Plumas (*Höge*); Guatemala, Dueñas, Capetillo, Pantaleon, Panajachel 5000 feet, San Gerónimo (*Champion*).

Leconte, trusting to his memory when in Europe, identified his species with the Colombian *Lithocharis angularis*, Er., and published this identification in the Ann. & Mag. N. H. ser. 4, vi. p. 403; this, however, was quite erroneous, as will be readily seen by comparing the two descriptions. The extent of the black colour on the basal portion of the elytra varies a great deal; our figure represents an example from Capetillo in which the black colour is rather more extended than it usually is.

ACALOPHÆNA.

Calophæna, Arribálzaga, Bol. Ac. Arg. vii. p. 267 (1884) (nec Klug).

This genus is distinguished from *Dacnochilus* not only by the spinose labrum, but also by the fact that the mandibles are thickened near the basal portion, and this thick part is minutely serrate or dentate; in this particular the structure does not quite agree with the description of Arribálzaga; but as I find, on comparison of several species, that this character is subject to some variation, I do not look upon the discrepancy as of much importance. The genus will include *Lithocharis macularis* and *L. angularis*, Er., and *L. polita*, *L. pagana*, *L. germana*, and *L. picta*, Sharp, in addition to Arribálzaga's typical species from Buenos Ayres. With this latter I am not acquainted; it is said to be termitophilous in its habits. Mr. Champion informs me that *A. angularis* is often found under stones.

Although of wide distribution in the New World, the genus has not yet occurred further north than Mexico.

As the name proposed by Señor Arribálzaga is already in use in Coleoptera, I have made a change in it.

1. **Acalophæna angularis.** (Tab. XIV. fig. 13.)

Lithocharis angularis, Er. Gen. et Spec. Staph. p. 614 [1].

Hab. Mexico [1], Cerro de Plumas (*Höge*), Tuxtla (*Sallé*), Jalapa (*Flohr*); Guatemala, near the city, Capetillo, Tactic (*Champion*); Nicaragua, Chontales (*Janson*).—South America, Colombia [1], Venezuela (*Sallé*).

Our figure is taken from the example found at Jalapa by Mr. Flohr.

LITHOCAON.

Corpus elongatum, angustulum, politum. Tarsis anterioribus sat fortiter dilatatis. Labrum per latum, breve, anterius fere subrectum, medio incisione parva. Mandibulæ modice elongatæ, unidentatæ. Caput collo lato. Tarsi posteriores articulo basali modice elongato, quam secundus longiore, quam ultimus breviore.

This distinct genus has the aspect of a *Lathrobium*, but I think is more nearly allied to the *Lithocharis* division of the Pæderina. The penultimate joint of the maxillary palpus is broad, with a truncate extremity; and the short terminal joint is also very broad. The moderately long mandibles have a single long tooth in the middle. The broad head is truncate behind, and has an abrupt but broad neck. The prosternal pieces are largely developed, the process above the coxæ being large, and spreading out laterally so that the prolonged side pieces overlap it. The hind tarsi are rather slender, the joints one to four decreasing gradually in length; the terminal joint about as long as the first, second, and third together.

There are two species, as yet undescribed, of the genus from Rio Janeiro in my collection.

1. **Lithocaon sparsus.** (Tab. XIV. fig. 14.)

Angustulus, elongatus, nitidus, rufo-piceus, antennis pedibusque testaceis, elytris rufescentibus apice fusco; capite subquadrato, fortiter punctato, medio lævigato; prothorace sat fortiter punctato, area longitudinali impunctata.

Long. $5\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ small, the second and third joints about equal, the tenth about as long as broad. Head rather short, the eyes a little prominent; on each side rather closely and very coarsely punctate, with a broad smooth space along the middle. Thorax longer than broad, a little narrowed behind, the base greatly rounded, the surface less coarsely and closely punctured than the head, the broad smooth space along the middle rather irregular. Elytra rather longer than the thorax, quite sparingly punctured, shining. Hind body only sparingly punctate, the penultimate segment a little infuscate across the middle. The male has an elongate parallel-sided excision of the last ventral segment.

Five examples. Sandy banks of mountain streams (*Champion*).

LYPETICUS.

Labrum anterius leviter tri-emarginatum, medio dentibus duobus robustis, perparum prominulis. Mandibulæ bidentatæ. Tarsi posteriores graciles, evidenter quinque-articulati, articulo basali elongato, secundo bene longiore. Caput collo angusto.

The structure of the labrum is rather peculiar: in the middle there is a broad shallow excision, and on either side of it a very short broad truncate tooth, and again on either side a very slight emargination. The head is quadrate, with a narrow neck, not, however, so extremely narrow as in *Scopæus*. The prosternum is short, and the process above the coxæ extends on to the metasternum. The penultimate joint of the maxillary palpus is short, moderately broad, the terminal joint very minute and slender. The front tarsi are scarcely dilated.

The genus is founded on *Lithocharis munda*, Sharp. When describing that species, I thought that it would form a distinct genus; and as I have now introduced the elongation of the prosternal process as an aid to the separation of these forms, *L. munda* cannot remain in *Lithocharis*, as it has the prosternal structure of the *Medon* type. The best position for the genus seems to be between *Orus* and *Neomedon*; from the latter of these two genera it is distinguished by the very narrow neck, narrower even than in *Orus*.

1. Lypeticus celatus.

Fulvo-castaneus, nitidulus, antennis elytrisque testaceis, pedibus pallide testaceis; capite majore, subcordato, utrinque post oculos profunde strigoso; prothorace subpentagonali, nitido, sublævigato; elytris sat crebre punctatis.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, El Reposo 800 feet (*Champion*).

This will be readily identified among our species by the peculiar sculpture of the head on either side behind the eyes. The head is deeply emarginate behind, with the hind angles much rounded, so that it is subcordate in form. The thorax is nearly as long as broad, with the sides a good deal narrowed behind, and the front margin rather strongly oblique on either side; the punctuation is quite absent along the middle, and on either side is obsolete and distant. The elytra are more distinctly punctate, the punctuation being definite and rather deep at the base, more obsolete behind.

The unique example is in bad preservation, and is, I believe, a male; for though I have not been able to withdraw the retracted terminal segment, yet I think I can see that it bears a deep emargination of the ventral plate. The species is closely allied to the Amazonian *L. mundus*, but is rather more elongate, with more cordate head, longer and narrower thorax (whose punctuation is obsolete), &c.

Sandy banks of streams (*Champion*).

NEOMEDON.

Corpus subdepressum. Mandibulæ mediocriter elongatæ, bidentatæ. Labrum breve, latum, medio haud vel vix emarginato, utrinque minute trituberculato. Tarsi posteriores, articulo basali quam secundus dimidio longiore, anteriores leviter dilatati.

This genus is readily distinguished amongst its immediate allies by its possessing two large teeth on the mandibles, the usual basal tooth being quite absent. Compared with the European genus *Medon*, it differs in the structure of the mandibles and labrum, and also in having the neck broader. As in the European species the horny pieces of the prosternum are largely developed, so that the coxæ are much enclosed; the basal ventral segment is carinate.

The genus, so far as I know, is peculiar to our region, though I have little doubt it will be found in other parts of Tropical America. *Lithocharis gigantea*, Fauv., from New Guinea, is somewhat similar in appearance, but has tridentate mandibles and different front and hind feet. *Lypeticus* has only two teeth to the mandibles, but in that genus the neck is very narrow, almost *Scopæus*-like, and the facies is very different.

1. **Neomedon princeps.** (Tab. XIV. fig. 15.)

Major, latiusculus, subdepressus, niger, elytris pedibusque rufis, antennis rufo-obscuris; capite, prothorace elytrisque crebrius fortiter punctatis.
Long. 8–10 millim.

Hab. Guatemala, Capetillo, San Gerónimo, San Joaquin, Panajachel (*Champion*).

Antennæ with very elongate third joint, quite twice as long as the second and three times as long as broad; tenth joint rather longer than broad. Head large, closely and coarsely punctate, the punctuation absent from a very narrow space along the middle. Thorax more closely and finely punctured than the head, with a broader and more distinct smooth space along the middle. Elytra rather longer than the thorax, densely and rather coarsely punctate. The male has a slight emargination of the hind margin of the last ventral plate.

Of this species a series of twelve examples was obtained. It lives under bark.

2. **Neomedon rufipennis.**

Latiusculus, subdepressus, niger, elytris, antennis pedibusque rufis; capite, prothorace elytrisque crebrius fortiter punctatis.
Long. 7 millim.

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

This insect appears to be very closely allied to *N. princeps*, but is considerably smaller, and has shorter antennæ, with a much less elongate third joint, this being only about twice as long as it is broad. The male characters of the two are similar.

3. **Neomedon sallæi.**

Latus, niger, capite, prothorace, elytris, antennis pedibusque rufis; capite prothoraceque parce punctatis, hoc fortiter transverso, ad latera leviter impresso.
Long. circiter 7 millim.

Hab. MEXICO, Jacale (*Sallé*).

Third joint of the antennæ not twice as long as the second. Head large, a little curvate at the sides; the punctuation rather coarse and sparing, absent from the discoidal part. Thorax very short, the sides a little impressed, so as to have a slightly concave appearance, the surface sparingly subobsoletely punctate, with a broad smooth space along the middle, which behind is indistinctly canaliculate. Elytra broad and short, rather sparingly and coarsely punctate. Hind body obscure reddish towards the apex.

The unique example of this very distinct species is in bad preservation; it is a male, and has a broad, shallow, rounded emargination on the last ventral plate.

4. **Neomedon mexicanus.**

Parum latus, subdepressus, niger, elytris, antennis pedibusque rufis, his femoribus piceis; capite prothoraceque dense fortiterque punctatis, hoc tenuiter canaliculato; elytris crebre subrugulose punctatis.
Long. $5\frac{1}{2}$ millim.

Hab. MEXICO, Volcan de Orizaba (*Sallé*), Las Vigas (*Flohr*), Jalapa, Cordova (*Höge*).

Antennæ rather small, the third joint a little longer than the second. Head subquadrate, black and shining, densely and coarsely punctate. Thorax not so long as broad, a little narrowed behind, closely and coarsely punctured, with a very fine channel along the middle, but without smooth space. Elytra slender, rather longer than the thorax, moderately closely punctate, the punctuation being somewhat rough and indefinite. The male characters are apparently very slight, but there is a just perceptible emargination of the hind margin of the last ventral plate, that is, I have little doubt, indicative of this sex.

5. **Neomedon mollis.**

Subdepressus, testaceo-ferrugineus; capite prothoraceque dense fortiterque punctatis, hoc medio tenuiter canaliculato; elytris crebre subrugulose punctatis.
Long. $5\frac{1}{2}$ millim.

Hab. MEXICO, Mirador (*Höge*).

This species is rather broader than *N. mexicanus*, though readily distinguished by the pallid colour; the sculpture, too, appears to be a little coarser and closer. I do not observe any male characters.

Four examples.

6. **Neomedon densus.**

Sat latus, subdepressus, niger, elytris, antennis pedibusque rufis, his femoribus piceis; capite prothoraceque densissime fortius punctatis, hoc canaliculato; elytris crebre punctatis.
Long. $5\frac{1}{2}$ millim.

Hab. Mexico, Chalchicomula (*Sallé*).

This insect is broader than *N. mexicanus*, and is remarkable for the excessive closeness of the coarse thoracic punctuation; the head also is very closely and coarsely punctate, but not quite so densely as the thorax. In other respects the unique example agrees with *N. mexicanus*.

7. **Neomedon flohri.**

Subdepressus, niger, nitidus, antennis rufis, pedibus piceis, tibiis tarsisque rufis; capite prothoraceque dense fortiter punctatis, hoc medio linea lævigata angusta, medio obsolete canaliculata; elytris crebrius fortiter punctatis.
Long. $5\frac{1}{2}$ millim.

Hab. Mexico, Las Vigas (*Flohr*).

This species, also, is closely allied to *N. mexicanus*, but is broader, and has a fine impunctate line on the thorax; the head is considerably larger, and the elytra are broader and shorter and quite black. The male has a small angular notch at the apex of the last ventral plate.

8. **Neomedon nigricans.**

Sat latus, subdepressus, niger, nitidus, antennis palpisque fusco-rufis, pedibus fusco-nigris, tarsis testaceis capite prothoraceque crebrius fortiter, elytris dense subrugulose, punctatis; prothorace medio canaliculato; tarsis anterioribus parum dilatatis.
Long. $5\frac{1}{2}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

Exceedingly similar to *N. flohri*, but undoubtedly distinct on account of the slight dilatation of the front tarsi; the elytra, too, in the present species are more densely punctate. The male has a slight emargination of the last ventral plate.

Four examples.

9. **Neomedon puncticeps.**

Sat latus, subdepressus, nigricans, antennis pedibusque fusco-rufis; capite præsertim fortius densiusque punctato, prothorace crebrius fortiterque punctato, medio linea angusta lævigata, obsoletius canaliculato; elytris crebre fortiterque punctatis; tarsis anterioribus parum dilatatis.
Long. $5\frac{1}{2}$ millim.

Hab. Mexico, Mirador (*Höge*); Guatemala, San Gerónimo (*Champion*).

This insect has a large broad head, remarkable on account of its very dense and coarse punctuation; the sculpture of the head and thorax readily distinguishing the

species from *N. nigricans*. *N. densus* has the front tarsi rather more dilated and a smaller head.

Two female examples; in one, which is immature, the elytra are piceous. The individual from Mexico is in bad preservation, but appears to be a variety of the same species.

MESPALERUS.

Corpus depressum. Mandibula sinistra bidentata, dextra tridentata. Labrum breve, fere recte truncatum. Tarsi anteriores haud dilatati; posteriores breves, articulis secundo, tertio quartoque subæqualibus, articulo basali parum elongato, sed quam secundus bene longiore.

This genus, though closely allied to *Neomedon*, seems quite distinct by the above characters. The only species I know are those described below.

1. **Mespalerus præustus.**

Angustulus, depressus, nigricans, nitidus, antennis rufis, pedibus fuscis, tibiis dilutioribus, tarsis testaceis; elytris dimidio basali rufo-lurido, subtiliter punctatis, capite prothoraceque fortiter punctatis.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Aceytuno, San Gerónimo, San Joaquin, Balheu (*Champion*).

Antennæ short and rather stout, the third joint slightly longer than the second. Head large, quadrate, coarsely, very closely and regularly punctate, shining; eyes small. Thorax small, transverse, narrowed behind, coarsely and closely punctate, with a very fine smooth line down the middle, the punctuation not so coarse and close as that of the head. Elytra long and narrow, finely punctate, shining; the basal portion largely red, the apical portion black, the division between the two colours rather indefinite. There is scarcely any external difference between the male and the female.

2. **Mespalerus flavipennis.** (Tab. XIV. fig. 16.)

Angustulus, depressus, nitidus, fuscus, capite nigro, antennis, elytris pedibusque testaceis; capite quadrato, crebre fortiterque punctato.
Long. 4 millim.

Hab. GUATEMALA, Zapote, San Gerónimo, El Jicaro (*Champion*).

This insect is very closely allied to *M. præustus*, and is of similar flat, parallel form; it is, however, rather smaller in size, and the punctuation is not quite so coarse; and, though the two examples are rather immature, I have little doubt the coloration will be found constantly more pallid.

One example from each locality; the specimen figured was taken at San Gerónimo.

3. **Mespalerus debilis.**

Angustior, sat depressus, nitidus, nigricans, antennis fusco-rufis, pedibus testaceis, elytris basin versus vage rufescentibus; capite quadrato, dense fortiterque punctato; prothorace minus transverso, fortiter subobsolete punctato, medio linea lævigata; elytris subtiliter minus dense punctatis.
Long. vix $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Antennæ small and rather slender; eyes rather prominent; sides of the head very slightly narrowed behind. Thorax not so long as broad, distinctly narrowed behind, transversely convex, with a coarse subobsolete punctuation, and a slender smooth line along the middle canaliculate at the base.

This insect is much smaller than *M. præustus* and less depressed, and the teeth of the mandibles are more feeble. It is unique.

4. **Mespalerus piesticulus.**

Angustior, sat depressus, nitidus, ferrugineus; capite quadrato, cumque prothorace crebrius sat fortiter punctato, hoc medio tenuiter obsolete canaliculato; elytris quam prothorax paullo longioribus, crebrius sat fortiter punctatis.

Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

The small size, pallid colour, and rather less depressed form are sufficient to distinguish this species from the rest of the group; it also has comparatively shorter and more coarsely punctate wing-cases, and the head is not so largely developed, and has rather less dense and coarse punctuation. Unique.

SCIOPORUS.

Corpus minus depressum. Mandibulæ tridentatæ, dentibus sæpe inæqualibus. Labrum sat elongatum, medio excisum, utrinque muticum. Tarsi anteriores leviter dilatati; posteriores modice elongati, articulo basali quam secundus bene longiore.

This little group of species comes close to the European *Medon*, but I think it would be incorrect to treat them as one. *Scioporus* has a broader neck and shorter prothorax; the mandibles appear to be invariably tridentate; the membrane intervening between the labrum and head is larger, and the labrum itself is apparently denticulate in the middle. The type is *S. brunneus*; I mention this as the paucity of examples and the difficulty of manipulating them has made my examination less complete than it should be. *Lithocharis crassula*, Sharp, belongs to the genus, and is the only one I am acquainted with in addition to those here characterized, though some of the Californian forms approach the genus very closely.

1. **Scioporus brunneus.**

Minus depressus, brunneo-ferrugineus, sat nitidus, pedibus testaceis; capite prothoraceque crebrius fortiter punctatis, hoc medio linea angusta lævigata.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city (*Champion*); NICARAGUA, Chontales (*Janson*), Granada, Chinandega (*Sallé*).

Head rather broad, quadrate; eyes large and prominent, occupying one half the

length of the sides; labrum not denticulate, distinctly notched in the middle, separated from the head by a rather large membrane; middle tooth of the right mandible elongate, the upper and lower teeth small; basal tooth of the left mandible longer than the two upper teeth. Antennæ slender, the third joint a little longer than the second. Thorax rather strongly transverse, distinctly narrowed behind, like the head coarsely and closely punctate, but with a distinct smooth line down the middle. Elytra a little longer than the thorax, rather closely rugose punctate. Tarsi slender, rather long; the anterior pair well dilated. The male has a slight emargination of the last ventral plate.

2. **Scioporus fulvescens.** (Tab. XIV. fig. 17.)

Sat latus, minus depressus, ferrugineus, capite vix picescente, nitidus; capite prothoraceque crebre fortiter punctatis, hoc medio linea lævigata.
Long. 4 millim.

Hab. Panama, David (*Champion*).

Antennæ stout and short, the first joint thick, the third joint small, rather smaller than the second, the joints from the fourth onwards not so long as broad. Head coarsely and distinctly but rather irregularly punctured, the disc convex, shining and impunctate. Thorax strongly transverse, coarsely, moderately densely punctate, with a very distinct smooth line along the middle. Elytra longer than the thorax, somewhat shining, rather definitely and moderately coarsely punctate. Front tarsi rather feebly dilated.

Two examples.

3. **Scioporus signatus.** (Tab. XIV. fig. 18.)

Fuscus, capite prothoraceque nigricantibus, antennis, pedibus elytrisque ferrugineis, his medio nigris; capite dense rugoso-punctato, opaco, disco lævigato, nitido.
Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

The head has a dense confluent punctuation on either side, very confused behind; the lower tooth on the right mandible is a little longer than the two upper. The thorax is short, a little narrowed behind, shining, very coarsely, rather closely punctate, with a smooth space on the middle, not extending the whole length. Elytra longer than the thorax, indistinctly punctate, ferruginous, with a very large angular black mark on the disc. The male has a slight emargination of the last ventral plate. Unique.

4. **Scioporus sellatus.**

Fuscus, capite prothoraceque piceis, nitidis, antennis pedibusque testaceis, elytris ferrugineis, dorso fusco; capite prothoraceque fortiter disperse punctatis, hoc medio linea parum discreta lævigata.
Long. $4\frac{1}{2}$ millim.

Hab. Guatemala (*Champion*).

Closely allied to *S. signatus*, but with a different punctuation of the head and thorax, especially the former, where the punctures leave the disc quite shining, and become scanty towards this smooth spot, the hind angles being, however, densely and rugosely punctate. The thoracic punctuation is coarse but subobsolete, the smooth space down the middle is finely canaliculate behind. The fuscous mark on the wing-cases is ill-defined. The unique example was not labelled with the locality.

5. Scioporus apicipennis.

Niger, nitidus, antennis, pedibus elytrorumque apice testaceis; capite prothoraceque fortiter punctatis, hoc medio linea angusta lævigata.

Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ rather short and slender, slightly thicker at the apex; second and third joints equal in size, the seventh to the tenth each not so long as broad. Head rather short, quadrate, very slightly narrowed behind, the eyes a little convex, occupying one half the length of the side, the surface shining, very coarsely punctate. Thorax slightly transverse, very slightly narrowed behind, very coarsely but somewhat obsoletely and not densely punctate, with a rather indefinite smooth space along the middle. Elytra elongate, rather shining, somewhat sparingly and finely punctate, black, with the apical margin yellow. Front tarsi rather strongly dilated. On the right mandible the two upper teeth are very small, on the left the upper tooth is very minute. Unique.

6. Scioporus obsoletus.

Fuscus, capite nigro, prothorace piceo, antennis, pedibus elytrisque ferrugineis, his disco infuscato; capite sat fortiter disperse punctato, prothorace obsolete punctato.

Long. $4\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This species is very closely allied to *S. signatus*, but is readily distinguished by the absence of coarse punctuation on the head and thorax. The head is shining, has no very large punctures, and the moderately large punctures are very scanty on the middle and front, but on the vertex, especially at the sides, form a very dense confluent punctuation, while the thoracic punctuation is rather fine and obsolete; the large fuscous mark on the wing-cases is rather indefinite. Unique.

7. Scioporus chontalenus.

Piceus, nitidus, antennis pedibusque testaceis, elytris ferrugineis, apicem versus obscuratis; capite prothoraceque parce obsolete punctatis.

Long. $4\frac{1}{2}$ millim.

Hab. Nicaragua, Chontales (*Janson*).

Antennæ rather long. Head with the hind angles well marked, the surface only

quite obsoletely and sparingly punctured, except at the hind angles, where there is a fine rugose punctuation; eyes occupying less than one half of the length of the sides. Thorax strongly transverse, its punctuation scanty and quite obsolete. Elytra very indistinctly punctuated, the infuscation of their extremity indefinite.

In addition to the different coloration, this insect has longer antennæ and smaller eyes than the preceding. Unique.

8. **Scioporus parvidens.**

Fusco-rufus, capite prothoraceque piceis, hoc dilutiore; antennis elytrisque ferrugineis, his apicem versus fuscescentibus, pedibus testaceis; capite prothoraceque crebrius sat fortiter, minus regulariter punctatis.
Long. 4 millim.

Hab. GUATEMALA, Chiacam in Vera Paz (*Champion*).

Antennæ small, a little thickened at the apex; basal joint unusually long, nearly equal to the first, second, and third together; third joint small, rather smaller than the second. Mandibles tridentate, but the teeth very small, the basal one of the right mandible in fact only barely indicated. Labrum large, distinctly excised. Head rather broad and short, closely and finely rugose-punctate, the disc smoother. Thorax closely and rather coarsely punctate, with a narrow smooth line down the middle. Elytra longer than the thorax, closely and rather finely rugose-punctate.

Only one example, in bad preservation.

9. **Scioporus latifrons.** (Tab. XIV. fig. 19.)

Latior, subdepressus, fusco-niger, elytrorum humeris apiceque ferrugineis, antennis pedibusque rufis; dense subtilissime punctatus; capite latiore, membrana clypeali majore.
Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Antennæ rather slender, the first joint as long as the second and third together, the latter much longer than the second, the penultimate joint scarcely longer than broad. Head broad and flat, extremely densely and finely punctate, the sides and the hind angles a little rounded; the mandibles elongate, the pallid membrane between the clypeus and labrum remarkably large, the clypeus behind it obscurely margined. Thorax transverse, like the head very densely and finely punctate, very slightly narrowed behind. Elytra elongate, densely and finely punctate, blackish, with the shoulder and hind margin ferruginous. Terminal joint of tarsi elongate, on the posterior foot about equal to the three basal joints together. Male with a moderately deep excision in the last ventral plate.

A small series of this species was found, but they are in a very decayed state. In fresh examples there would probably be numerous long setæ present *.

* It may prevent confusion to describe a very closely allied species found at Rio Janeiro by Squire.

Scioporus breviceps, n. sp. *S. latifronti* persimilis, capite breviore, subtransverso abdominisque segmento ultimo in mare profundius exciso, tantum fere differt.

10. Scioporus ——?

Hab. Panama, Bugaba (*Champion*).

A specimen in too fragmentary condition for close examination, represents apparently a species near *S. latifrons*, but with the basal portion of the elytra pale yellow.

STILOMEDON.

Corpus depressum, dense minus subtiliter punctatum. Caput subquadratum, collo angusto. Tarsi omnes breves; anteriores dilatati; posteriores articulo quarto membranaceo, sub articulo quinto prolongato.

The chief peculiarity of this genus was pointed out by me some years ago when describing as members of *Lithocharis* some species that must now be referred to *Stilomedon*. It consists in the fact that the terminal joint of the hind and middle tarsus is inserted close to the third joint, the fourth joint being placed beneath the terminal joint, but remaining still very conspicuous owing to its greater width; it is semimembranous in texture. This genus, therefore, and *Ophiomedon* and *Suniocharis*, so far as the tarsi are concerned, connect the *Lithocharis* group of genera quite intimately with the forms near *Sunius*.

Stilomedon is also remarkable by its slender neck and subpentagonal thorax; the chitinous pieces of the prosternum are greatly developed; the broad prosternal process attains the mesosternum and is overlapped by the side pieces, the coxal cavities (when the coxæ have been removed) thus looking at first glance as if they were completely enclosed.

The genus will include *Lithocharis biseriata*, Er., and *L. discedens*, Sharp, in addition to the species of our region.

1. Stilomedon triseriatus. (Tab. XIV. fig. 20.)

Depressus, opacus, ferrugineus, densissime punctatus; prothorace omnino densissime punctato, haud strigoso, basi conspicue quadripunctato; elytris quam prothorax longioribus, seriebus tribus elongatis punctorum majorum. Long. 5 millim.

Hab. Panama, David, Bugaba (*Champion*).

Antennæ short, ferruginous. Head large, quadrate; coarsely and excessively densely punctate, so that the interstices are reduced to a very fine reticulation. Thorax not so long as broad, the sides much narrowed behind, the front strongly oblique on either side; the surface excessively densely punctate, so that the interstices are almost as minute as possible, but not strigulose; there is no median smooth line, but a very fine, short channel frequently exists on the posterior part, and on the hind margin there are four large punctures of equal size, the surface between them being feebly plicate. The elytra are much longer than the thorax, densely punctate, only feebly shining, and on each there exists three very distinct series of larger punctures which do not quite extend to the hind margin. The male has the penultimate ventral segment feebly

impressed along the middle, and at the hind margin on each side of the impression there is a black tuft of very short pubescence; the terminal segment bears a very long, rather narrow notch.

This insect is readily distinguished from the allied species by the longer elytra. *Lithocharis biseriata*, Er., is no doubt closely allied, but the description cannot apply to our species. The Amazonian *L. discedens*, Sharp, is also very close, but is smaller and has shorter elytra.

A small series only was secured of this species.

2. Stilomedon strigicollis.

Subdepressus, ferrugineus, capite prothoraceque piceo-ferrugineis, densissime punctatus; prothorace fortiter transverso, densissime strigoso-punctato; elytris sat nitidis, crebre punctatis, punctis seriatis vix perspicuis.

Long. 4–5 millim.

Hab. MEXICO, Teapa (*Pilate*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, El Tumbador, Cerro Zunil 4000 to 5000 feet, El Reposo, Cahabon (*Champion*); PANAMA, David, Bugaba, Volcan de Chiriqui (*Champion*).

Though very similar at first sight to *S. triseriatus*, this insect cannot be confounded therewith, the thorax being strigose, with the basal punctures scarcely perceptible, the elytra shining, much shorter, with the serial punctures almost imperceptible. The male characters consist only of a feeble emargination of the hind margin of the last ventral plate.

The two Mexican exponents are from Chevrolat's collection, where they were ticketed "*Lithocharis cribrata*, Fauvel, ined."; they form a variety of smaller size, with smaller and rather more coarsely sculptured head; the three examples from Belize agree with them.

S. strigicollis has not been found in numbers, but I have examined about thirty examples.

3. Stilomedon connexus.

Lithocharis connexa, Sharp, Trans. Ent. Soc. Lond. 1876, p. 254[1].
Lithocharis convexa, Sharp, l. c. p. 262 (errore typog.).

Hab. PANAMA, David, Bugaba (*Champion*).—SOUTH AMERICA, Amazons[1].

I wrote the name of this species as *connexa*, and it is so styled on p. 254 of the volume above quoted, but at the commencement of the description the printer changed it to *convexa*, and this error escaped my observation: as *convexus* is a bad trivial designation for this species, it will be better to use the word *connexus*, which is sufficiently certified by the first of the two quotations cited.

Mr. Champion met with this insect in abundance at David, but only one individual was found at Bugaba.

4. **Stilomedon verticalis.**

Subdepressus, ferrugineus, elytris rufescentibus; capite prothoraceque densissime punctatis, subopacis, illo vertice summo medio breviter canaliculato-impresso; elytris obsoletius triseriatim punctatis.
Long. $4\frac{1}{2}$ millim.

Hab. Panama, David (*Champion*).

Extremely similar to *S. connexus*, but with a longer thorax, which is rather more densely and coarsely punctate; the outline of the head is evidently emarginate behind, and there is a small depression in the middle just in front of the neck. There are other slight differences which it is not necessary to mention, as the male characters are quite different: the penultimate ventral plate has a depression along the middle, which is feebly carinate on either side, and the apical segment exhibits a rather deep narrow notch. Unique.

OPHIOMEDON.

Corpus subdepressum, dense subtilissime punctatum. Caput magnum, collo angusto. Tarsi omnes breves; anteriores sat dilatati; posteriores articulo quarto brevi, articulo quinto ad articuli tertii basin proxime inserto.

This genus, though allied to *Stilomedon*, has not the fourth joint produced in any conspicuous manner underneath the terminal joint, and although the fifth joint is inserted very near to the third—so that if the transverse sutures on the upper face of the tarsus be considered without reference to the lateral outline, the tarsus appears only four-jointed—yet the fourth joint remains really of normal size in relation to the other joints. *Suniocharis* has a similar tarsal structure, but in that genus the tarsi are long and slender. In *Ophiomedon* the first joint of the hind tarsus is short, but is a little longer than the next; the labrum is large, with two distant short teeth in the middle; the prosternal structure is, I believe, similar to that of *Stilomedon*, though I have no example for dissection. *Ophiomedon* will include also the Amazonian *Lithocharis integra* and *L. compressa*, Sharp, and the Hawaiian *L. incompta*.

1. **Ophiomedon stipes.** (Tab. XIV. fig. 21.)

Subdepressus, sordide ferrugineus, opacus, antennis pedibusque testaceis, densissime subtilius punctatus; capite majore, posterius emarginato, vertice summo in medio impresso.
Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, San Juan in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*).

Antennæ small, the terminal joints a little thicker, the penultimate joint not quite so long as broad. Head large, rather larger than the elytra, the eyes comparatively small, the sides a little curved, the surface dull, densely and finely punctate, with an obscure smooth line along the middle. Thorax strongly transverse, a good deal narrowed behind, densely and finely punctate, with a short, very fine, and indistinct channel in the middle behind. Elytra a good deal longer than the thorax, very finely,

densely punctured, dull, of a ferruginous colour. Legs short. The male has an extremely feeble emargination of the hind margin of the last ventral segment.

One example from each locality.

2. **Ophiomedon longiceps.**

Subdepressus, sordide ferrugineus, capite prothoraceque nigricantibus, antennis pedibusque testaceis, densissime subtilissimeque punctatus, opacus; capite elongato, oblongo, posterius emarginato; prothorace subquadrato.
Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ small, not thicker externally, the terminal joint short. Head elongate, the eyes small, very densely and finely punctate, the vertex rather deeply emarginate. Thorax rather small, as long as broad, a little narrowed behind, the punctuation extremely minute. Elytra very finely punctate, ferruginous yellow, infuscate about the suture.

Three examples. I do not detect any sexual character.

3. **Ophiomedon subtilis.**

Subdepressus, fuscus, antennis pedibusque sordide testaceis; capite orbiculato-quadrato, densius subtiliusque punctato; prothorace subquadrato, omnino subtilissime densissime vix perspicue punctato.
Long. 4¾ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

We have received only one example, in very bad preservation, of this species, which, however, is clearly distinct, and can be certainly distinguished from *O. longiceps* by the shape of the head and thorax; the former is much curved at the sides near the hind angles, and the vertex is less emarginate; while the latter is scarcely at all narrowed behind. The punctuation of the head is fine and very dense, but quite distinct, while that on the thorax can scarcely be distinguished; the thorax has an excessively fine, short channel behind the middle; the terminal joint of the tarsus is longer than in the allied species. The unique individual has a broad, but very slight, emargination of the last ventral segment, and is probably a male.

4. **Ophiomedon longulus.**

Elongatus, angustulus, subdepressus, ferrugineus, capite prothoraceque nigricantibus; capite subquadrato, omnino densissime minus subtiliter punctato, opaco; prothorace subelongato, densissime minus subtiliter punctato, tenuiter canaliculato; elytris dense punctatis, minus opacis.
Long. 5 millim.

Hab. PANAMA, Bugaba 800 to 1500 feet (*Champion*).

Antennæ rather long, not thickened externally, each joint longer than broad. Head not emarginate behind, its punctuation excessively dense, moderately fine. Thorax as long as broad, very slightly curvate at the sides, the front angles indistinct, the surface very densely, moderately finely punctate, with a fine channel along the middle nearly

reaching the base, but rather further from the front margin. Elytra elongate, densely and distinctly punctate, rather shining.

The unique example is probably a female; it is in a very fragile state, and I have damaged it a good deal in attempting to manipulate it in order to see all its characters. It can scarcely remain in this genus, but cannot be placed in any other at present formed. The mandibles are moderately long, quadridentate; the outline of the labrum I cannot see definitely, but do not think it differs much from that of the other species of this genus. The prosternal process and side-pieces are largely developed. The front tarsi are well dilated, their terminal joint stout. The basal joint of the hind tarsus is apparently quite short, the terminal joint being stout and elongate, almost as long as the other four together. If this be correct, and the tarsi have really four equal short basal joints, the insect should clearly be a distinct genus.

MONOCHARIS.

Corpus sat convexum, laxe pubescens. Caput convexum, collo angusto. Tarsi anteriores vix dilatati; posteriores sat elongati, quam tibiæ paullo breviores, articulo quarto brevi, articulo quinto ad articuli tertii basin proxime inserto.

This genus is allied to *Ophiomedon*, though different in appearance, but the comparative elongation of the hind feet, accompanied by minor differences in many details, requires its separation, and it is in fact a connecting link between *Medon* and *Monista*. The mandibles are quite short, the labrum not large, its front margin nearly simple. The neck is very slender, as in *Stilomedon*. The prosternal structure is that of *Stilomedon*. The middle coxæ are small, deeply embedded. The hind feet are slender, and have the basal joint rather elongate, considerably longer than the second. The genus at present will comprise only one species.

1. **Monocharis vestita.** (Tab. XIV. fig. 22.)

Lithocharis vestita, Sharp, Trans. Ent. Soc. Lond. 1876, p. 259[1].

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet, Bugaba (*Champion*).—South America, Caracas (*Sallé*), Amazons valley[1].

An example from Caracas of this species is extant in Chevrolat's collection under the name *Lithocharis parvicollis*, Chevr.

SCIOCHARIS.

Sciocharis, Arribálzaga, Bol. Ac. Arg. vii. p. 260 (1884).

This genus is peculiar to the New World, where it appears to be numerous in species, and extends as far south as Buenos Ayres; it will probably be found to be represented in Mexico and the Southern States of the North-American Union. In addition to the species mentioned by Arribálzaga, it must comprise *Lithocharis oculata* and *L. humilis*, and probably also *L. egena* and *L. ardua*, Sharp.

Most of the species are found on the sandy banks of streams (*Champion*).

1. **Sciocharis arribalzagæ.** (Tab. XIV. fig. 23.)

Fusco-rufa, densissime punctata, antennis pedibusque testaceis; capite quadrato, posterius recte truncato, oculis convexis, densissime vix subtiliter punctato; prothorace transverso, posterius angustato, densius fortiusque punctato, medio linea angusta lævigata; elytris densissime subtiliter subrugose punctatis.
Long. $4\frac{1}{2}$–5 millim.

Hab. GUATEMALA, near the city, Capetillo, San Gerónimo (*Champion*).

First and second joints of the antennæ moderately thick. Head quite straight behind, not at all emarginate, the hind angles remarkably definite, the convex eyes extending more than halfway to the vertex, opaque, the rather coarse punctuation as dense as possible. Thorax more shining than the head, and rather more coarsely punctate, the narrow smooth line more or less distinctly canaliculate behind. Elytra infuscate-ferruginous, the humeral and lateral regions usually less infuscate. The male has a moderate angular excision on the last ventral segment.

I have named this insect in honour of the accomplished author of the memoir styled "Los estafilinos de Buenos Aires," to whom we are indebted for the generic characters of *Sciocharis*. The species is allied to the Amazonian *Lithocharis quadrata*, Sharp, but differs in numerous details.

Seven examples from the city of Guatemala, one from each of the other localities.

2. **Sciocharis nigriceps.**

Fusco-rufa, omnino densissime punctata, opaca, capite nigricante, prothorace fusco, antennis pedibusque testaceis; capite subquadrato, posterius truncato, angulis posterioribus leviter rotundatis; elytris sordide testaceis, regione suturali fusca.
Long. 4 millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

In this species the hind margin of the head is straight, not emarginate, the hind angles, however, being a little rounded. The thorax is as densely and finely punctate as the head, and the smooth line down the middle is correspondingly definite, it is feebly canaliculate at the base. The elytra are very finely punctate. The front tarsi are scarcely dilated.

This insect is readily distinguished from *S. arribalzagæ* by the punctuation of the head and thorax, as well as by the much less definite hind angles of the former, the smaller eyes, almost undilated front tarsi, &c. It is nearer to the Amazonian *Lithocharis egena*, Sharp, from which it differs in numerous details.

Four examples.

3. **Sciocharis cognata.**

Fusco-rufa, omnino densissime punctata, opaca, capite nigricante, prothorace fusco, antennis pedibusque testaceis; capite subquadrato, posterius truncato, angulis posterioribus leviter rotundatis; elytris sordide testaceis, regione suturali fusca.
Long. 4 millim.

Hab. GUATEMALA, near the city, Capetillo, and Tamahu (*Champion*).

So far as I can see this insect differs from *S. nigriceps* only by the smaller eyes, which not only are less convex, but occupy considerably less than one half of the length of the sides of the head, and by the punctuation on the basal portion of the thorax being less extremely dense and fine. The median line on the thorax is distinct and is canaliculate at the base. The front tarsi are very feebly dilated, and the male has only a broad shallow excision of the last ventral plate.

Four examples.

4. Sciocharis similaris.

Fuscula, subtiliter sed evidenter pubescens, omnino densissime punctata, opaca, capite nigricante, prothorace fusco, antennis pedibusque rufis, elytris sordide testaceis; capite subquadrato, posterius recte truncato, angulis posterioribus nullo modo rotundatis.

Long. 5 millim.

Hab. GUATEMALA, Aceytuno (*Champion*).

This species is extremely similar to *S. nigriceps*, though readily distinguished by the more sharply defined hind angles of the head. The punctuation of the head is excessively dense, so that the surface is minutely and finely yet roughly rugose; the thoracic punctuation too is excessively dense; there is no definite smooth line on the thorax, but a fine channel extends nearly the whole length. The emargination of the last ventral segment in the male is broader and less deep than it is in *S. nigriceps*, and the front tarsi are distinctly dilated. Unique.

5. Sciocharis capitata.

Subrobusta, ferruginea, capite prothoraceque fusco-ferrugineis, omnino densissime subtiliter punctata, opaca; capite majore, elytris fere latiore, posterius emarginato-truncato, angulis posterioribus fere acutis.

Long. 5 millim.

Hab. PANAMA, David (*Champion*).

This insect is much larger than *S. nigriceps*, and is readily distinguished from that species by the shape of the head. The punctuation of the head is excessively dense, subobsolete; on the posterior part of the thorax the sculpture is less dense and fine, so that the surface there is very feebly shining; the channel in the median smooth line extends almost all the length. The elytra are only slightly longer than the thorax, very densely, finely punctate. The unique example is apparently a female; the front tarsi are feebly dilated.

6. Sciocharis egena?

Lithocharis egena, Sharp, Trans. Ent. Soc. Lond. 1876, p. 264 [1].

Hab. GUATEMALA, near the city (*Champion*).—SOUTH AMERICA, Amazons valley [1].

The single example differs from the unique Amazonian type in several minute points of form, colour, and sculpture, so that it may prove to be not really conspecific.

7. **Sciocharis subnitens.**

Fusca, antennis pedibusque testaceis, elytrorum lateribus abdominisque apice ferrugineis; capite transversim subquadrato, oculis majoribus, obsolete punctato; prothorace crebre subtiliter punctato, subopaco, medio linea sat lata lævigata.
Long. 3 millim.

Hab. PANAMA, David (*Champion*).

Head short and broad, straight behind, the hind angles only very slightly rounded; eyes large and convex, occupying two thirds of the length of the sides; surface very finely and obsoletely punctate, on the disc almost impunctate. Thorax small, much narrowed behind, covered with a fine subgranular punctuation, leaving the surface a little shining, especially on the basal region, and with a broad smooth line down the middle which is very feebly canaliculate at the base. Elytra closely and finely punctate, slightly shining. Front tarsi undilated.

Closely allied to the Amazonian *S. egena*, Sharp, but with considerably larger eyes as well as less important differences in the colour and sculpture. Unique.

8. **Sciocharis testacea.**

Testaceo-ferruginea, elytris pedibusque flavis; capite subquadrato, oculis convexis sat magnis, dense subtilissime punctulato; prothorace crebrius subtiliter granuloso-punctato, medio linea lævigata.
Long. 3 millim.

Hab. GUATEMALA, Panzos, Paso Antonio (*Champion*); NICARAGUA, Chontales (*Janson*).

This insect is closely allied to *S. subnitens*, but, in addition to the colour distinctions, has a rather narrower head, with eyes occupying scarcely more than one half of the length of the sides, and the punctuation on the basal portion of the thorax is not so scanty. One example from each locality. The exponent from Paso Antonio may prove distinct, being of rather larger size and darker colour, with some minute differences of punctuation.

9. **Sciocharis nitidicollis.**

Fusca, abdomine fusco-ferrugineo, apice dilutiore, antennis pedibusque testaceis; capite transversim subquadrato, posterius recte truncato; prothorace nitido, tantum obsolete punctulato.
Long. $3\frac{1}{4}$ millim.

Hab. PANAMA, San Miguel in the Pearl Islands (*Champion*).

The eyes occupy more than one half of the length of the short head, which is quite straight behind, the angles not at all rounded, the surface finely punctulate, a little shining. Thorax strongly transverse, quite shining, finely punctate, with no smooth area along the middle, but with an indistinct channel behind. Elytra closely and finely punctate, blackish, shining.

This distinct little insect is nearest to the Amazonian *Lithocharis ardua*, Sharp. Unique.

10. **Sciocharis championi.**

Testacea, capite nigro, prothorace fusco, elytris apicem versus fuscescentibus, opaca, dense subtilissime punctata; prothorace minus fortiter transverso, elytris angustiore, in medio linea lævigata distincta.
Long. $3\frac{1}{8}$ millim.

Hab. GUATEMALA, Coatepeque (*Champion*); PANAMA, David (*Champion*).

This species has the base of the head rather rounded, its surface very densely and finely punctate, quite dull, the eyes occupying one half of the length of the sides. The thorax considerably narrower than the elytra, all the angles broadly rounded, the surface very densely and finely punctate, the smooth line along the middle very definite, not canaliculate. Elytra very densely and finely punctate, quite dull. The front tarsi are slightly dilated, and the male has a very broad rather shallow emargination of the last ventral plate.

Six examples from Guatemala, one from the State of Panama; this latter in bad condition and not certainly the same species.

11. **Sciocharis densicollis.**

Ferruginea, capite prothoraceque fusco-ferrugineis, elytris circa suturam fuscis, antennis pedibusque testaceis; capite prothoraceque omnino densissime punctatis, opacis, illo subquadrato, posterius recte truncato.
Long. 3 millim.

Hab. PANAMA, David (*Champion*).

Head quite truncate behind, the eyes occupying one half of the length of the sides. Thorax much narrowed behind, excessively densely and minutely punctured, quite dull, with a narrow, indistinct, canaliculate smooth line down the middle. Elytra quite dull, very densely punctate.

This species is readily distinguished from *S. championi* by the shape and colour of the head; it is, moreover, a broader insect. The front tarsi are feebly dilated, and the male has a broad shallow emargination of the last ventral plate. Six examples.

12. **Sciocharis gregaria.**

Ferruginea, capite fuscescente, elytris plus minusve late infuscatis, omnino densissime vix visibiliter punctulata, opaca.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Of very parallel form. Head subquadrate, not rounded behind, the eyes occupying one half of the length of the sides; surface dull, not visibly sculptured. Thorax also dull, and almost without visible sculpture, with very faint trace of a channel along the middle. Elytra densely and finely punctate. Front tarsi distinctly dilated. Male with a small excision at the narrow extremity of the last ventral plate.

Nearly three dozen examples were obtained of this species. The antennæ are extremely delicate and are broken off from nearly all the specimens.

13. **Sciocharis fragilis.**

Minor, angustula, sordide ferruginea, capite nigricante, prothorace fusco-ferrugineo, antennis pedibusque testaceis, omnino subtilissime fere invisibiliter punctulata, opaca.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, San Gerónimo, Aceytuno (*Champion*).

In this minute and obscure insect the head is subquadrate, the base and hind angles a little rounded, the eyes rather small, and not occupying one half of the length of the sides. The thorax is transversely subquadrate, only very slightly narrowed behind, the punctuation almost imperceptible, but a straight smoother space may be detected along the middle. The elytra are elongate, their punctuation extremely fine. The front tarsi are quite undilated. A good series was obtained.

14. **Sciocharis minuta.**

Minor, angustula, ferruginea, capite prothoraceque fuscescentibus, antennis pedibusque testaceis, omnino subtilissime fere invisibiliter punctulata, opaca.
Long. 2 millim.

Hab. PANAMA, San Miguel in the Pearl Islands (*Champion*).

This species is very closely allied to *S. fragilis*, but is smaller and narrower, and the head is less quadrate, being considerably narrower; the thorax, moreover, is about as long as broad. Unique.

15. **Sciocharis boops.** (Tab. XIV. fig. 24.)

Nigra, omnino densissime punctulata, opaca, antennis pedibusque fusco-rufis; capite subtransverso, oculis majoribus; prothorace haud transverso, basin versus angustato, basi in medio canaliculato.
Long. $4\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Head short and very broad, the hind angles very much rounded, the eyes convex, extending more than half the length of the sides, excessively finely and densely punctate, tomentose. Thorax much narrower than the head, considerably narrowed behind, excessively densely and finely punctate, with a deep channel in the middle behind. Elytra longer than the thorax, densely and finely punctate. Front tarsi much dilated.

Three examples.

16. **Sciocharis juno.**

Fusca, opaca, antennis pedibusque testaceis; capite transverso, oculis per magnis, prothorace basin versus angustato, medio canaliculato; elytris apicem versus dilutioribus.
Long. 3 millim.

Hab. PANAMA, Bugaba (*Champion*).

Head and thorax excessively obsoletely punctate, almost smooth but not shining, the latter with a narrow smooth line along the middle canaliculate at the base. Eyes very

convex, extending seven eighths of the length of the sides. Elytra very finely punctate, the apical margin pallid. Legs slender, the front tarsi not dilated. Unique. Closely allied to the Amazonian *Lithocharis oculata*, Sharp, but rather smaller, the thorax shorter and not so visibly punctate, and the pallid colour at the extremity of the elytra less extensive.

17. **Sciocharis perdita.**

Ferruginea, capite minore fuscescente, antennis pedibusque testaceis; dense subtilissimeque punctulata.
Long. $2\frac{3}{4}$ millim.

Hab. PANAMA, David (*Champion*).

Head rather small, the eyes extending the whole length of the sides, but not extremely convex, the vertex straight, the surface very feebly punctate, not shining. Thorax rather narrower than the head, rather broader than long, slightly narrowed behind, closely covered with a minute granular punctuation and with a vague smooth line along the middle. Elytra rather short, closely and finely punctate. Front tarsi slightly dilated.

Two examples.

18. **Sciocharis flavipennis.**

Fusco-nigra, antennis pedibusque testaceis, elytris pallide flavis; dense subtilissimeque punctulata.
Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Head subquadrate, the eyes extending scarcely half the length of the sides; surface opaque, scarcely visibly sculptured, feebly tomentose. Thorax subquadrate, excessively finely punctate, canaliculate at the base along the middle. Elytra a little longer than the thorax, scarcely visibly punctate, almost white. Legs rather stout, pale yellow; front tarsi very feebly dilated.

This species is readily identified by the remarkably pallid wing-cases. Two examples were obtained.

EUSCLERUS.

Caput suborbiculare, oculis maximis. Antennæ breviusculæ, parum setosæ, apicem versus paullo crassiores. Tarsi posteriores graciles, evidenter quinque-articulati, articulo basali quam secundus bene longiore; anteriores simplices.

Labrum rather small, rounded in front, but divided by a deep angular incision almost to the base, apparently without denticulation. Mandibles short, with feeble teeth. Penultimate joint of the maxillary palpus short and broad, with truncate apex. Neck of the head moderately broad. Front of the pronotum rounded. Prosternum rather large. Legs slender; hind tarsi with the fourth joint simple, conspicuously interposed between the third and the fifth, the basal joint a good deal longer than the second.

The position of this genus is rather doubtful, but I opine it will be found near to *Sciocharis*; still, as the structure of the labrum and maxillary palpus, so far at least as

I can gather, is somewhat of a Lathrobioid type, and as the condition of the pieces of the prosternum cannot be ascertained, this may prove to be an erroneous conclusion. The two unique examples are in a decayed state, and the under surface is much covered with dirt, which, owing to the fragile condition of the specimens, cannot be thoroughly removed.

1. **Eusclerus rugifrons.** (Tab. XIV. fig. 25.)

Niger, opacus, capite prothoraceque vix subænescentibus, antennis, pedibus elytrorumque apice testaceis; capite suborbiculari, dense rugoso-punctato, punctatura anterius grossiore.

Long. $3\frac{1}{8}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ short, a little thickened outwardly; third joint slender, much more so than the first and second. The punctuation of the head is coarse, rugose, and irregular, coarser in front, more indistinct behind, the eyes occupy nearly the entire length of the sides. Thorax narrower than the elytra, subquadrate, very densely punctate, the punctuation fine and granular, with a narrow smooth line on the basal portion. Elytra longer than the thorax, blackish, with the hind margin yellow, finely, extremely densely, subrugosely punctate, dull. The unique example is probably a female.

2. **Eusclerus sordidus.**

Sat latus, posterius attenuatus, fuscus, capite, prothorace elytrisque sordide ferrugineis, antennis pedibusque flavis; omnino densissime punctatus, opacus, prothorace in medio linea lævigata.

Long. 3 millim.

Hab. GUATEMALA, Cubilguitz 1000 feet (*Champion*).

Antennæ small, reaching but little beyond the back of the head, entirely yellow. Head large, subcircular; eyes very large, convex; surface excessively densely, finely rugose-punctate, quite dull. Thorax transversely subquadrate, a little narrowed behind, densely covered with aminute granular punctuation, with a distinct though narrow smooth line along the middle. Elytra rather short, but longer than the thorax, excessively densely, minutely subrugose-punctate, dull, infuscate-ferruginous. Hind body above black. Legs short, yellow. The male has a small emargination on the middle of the hind margin of the last ventral segment.

STILOCHARIS.

Caput elongatum. Labrum minute bidenticulatum. Caput collo angusto. Prothorax elongatus. Tarsi anteriores tenues; posteriores sat elongati, articulo basali quam secundus conspicue longiore.

This is one of several genera that connect *Medon* very closely with *Stilicus*. *Stilocharis* is near *Medon*, but differs by possessing a considerably narrower neck and a greater development of the anterior part of the prosternum. The left mandible is tri-, the

right quadri-dentate. The labrum ample, with two small denticles in the middle separated by a slight excision. The prosternal process rests on the front of the mesosternum, and the side pieces are rather large. Although the oblique elongation of the thorax on either side is greater than in *Medon*, yet it is not so great as in *Deroderus*.

1. **Stilocharis longula.** (Tab. XV. fig. 1.)

Elongata, angustula; nigro-fusca, capite vix subænescente, antennis, pedibus elytrisque fuscis; dense subtiliter punctulata.
Long. 5½ millim.

Hab. GUATEMALA, Capetillo, Zapote, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ rather short, not stout; third joint scarcely longer than the second, the penultimate scarcely so long as broad. Head oblong-oval, the eyes small; surface finely and very densely punctate, the punctuation definite in front, quite indistinct behind, the pubescence very fine and short. Thorax elongate, rather longer than broad, straight at the sides, finely and extremely densely punctured, with a rather indistinct fine line down the middle smooth. Elytra rather longer than the thorax, extremely densely and finely punctured. The male is distinguished by a very feeble emargination of the hind margin of the last ventral plate.

A series of twelve examples; the three specimens from the Quiche Mountains form a variety of slightly smaller size, with the elytra only about as long as the thorax.

DERODERUS.

Corpus subdepressum. Labrum bidenticulatum. Caput collo perangusto. Tarsi breves, crassiusculi; anteriores haud dilatati, posteriores articulo basali parum elongato.

This is intermediate in most respects between *Stilocharis* and *Stilicus*, but the tarsi are shorter and broader than in either of those genera. The labrum is ample, and has two short denticles in the middle. The left mandible is tri-, the right quadri-dentate, the basal tooth being in each case very small. The neck is not quite so slender as in *Stilicus*. In the typical species, *D. vestitus*, the sculpture is wholly unlike, but in the aberrant *D. difficilis* it is similar to, that of *Stilicus*.

I am not acquainted with any species other than those here described.

1. **Deroderus vestitus.** (Tab. XV. fig. 2.)

Fusco-rufus, capite nigricante, opacus, subtilissime punctatus, pube brevissima erecta dense vestitus; elytris punctis majoribus impressis parum distinctis.
Long. 6 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ short, dark red, the third joint a little longer than the second. Head subcircular, excessively finely and densely punctured and pubescent, quite dull; eyes small.

Thorax rather smaller than the head, about as long as broad, a little curvate at the sides and distinctly narrowed behind; the punctuation dense, excessively minute, indeed almost entirely obsolete, the pubescence dense; colour dull red. Elytra slightly longer than the thorax, finely and densely punctured, with some indistinct larger punctures, which are not serial in their arrangement. The male is distinguished only by the hind margin of the last ventral plate being less rounded than in the female, and scarcely perceptibly emarginate in the middle. Four examples.

2. **Deroderus punctipennis.**

Fuscus, capite prothoraceque nigris, pedibus fusco-rufis; densissime punctatus, elytris punctis majoribus impressis distinctis.
Long. 7 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Antennæ short and stout, the third joint a little longer than the second. Head subcircular, excessively densely, evenly and finely punctured, quite dull. Thorax subquadrate, a little narrower than the head and elytra, distinctly narrowed behind, its greatest length rather exceeding the breadth, punctate like the head, with an indistinct canaliculate carina at the base in the middle. Elytra elongate, longer than the thorax, densely and finely punctate, not quite so dull as the head and thorax, with numerous larger punctures subserially arranged. The unique example is probably a female.

3. **Deroderus latipes.**

Fusco-niger, subdepressus, densissime subtilissimeque punctatus, peropacus; antennis pedibusque sordide rufis, his crassiusculis.
Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Las Mercedes 3000 feet (*Champion*).

Antennæ short and stout, the third joint scarcely so long as the second, the fourth to the tenth differing little from one another, the fourth slightly longer than broad, the tenth not so long as broad Head subcircular, flat, excessively finely and densely punctulate. Thorax suboblong, slightly narrowed behind, rather longer than broad, punctate like the head, with a fine channel in the middle behind. Elytra elongate, flat; very densely and finely punctate, in a manner almost similar to the head and thorax; with very faint traces of larger punctures. Legs short and stout. The unique example is probably a female.

4. **Deroderus difficilis.** (Tab. XV. fig. 3.)

Latiusculus, niger, elytris sordide rufis, pedibus fusco-rufis, antennis testaceis; capite quadrato-orbiculato, densissime fortiterque punctato; prothorace fortiter punctato, medio area lata lævigata.
Long. $5\frac{1}{2}$–6 millim.

Hab. MEXICO, Las Vigas (*Flohr*).

Third joint of the antenna slender, a little longer than the second. Head broad, exces-

sively densely and coarsely punctate. Thorax broad, but rather longer than wide, greatly narrowed in front, moderately so behind, densely and coarsely punctate, with a broad space along the middle smooth and shining. Elytra rather shining, of a sordid red colour, rather finely punctate.

This species is a most difficult one to place; it agrees almost as well with *Stilicus* as with the typical species of *Deroderus*, and probably should form a genus between the two. The shorter and stouter tarsi and the less development of the angular sides of the thorax are the chief characters that forbid its being located in *Stilicus*.

EUSTILICUS.

Corpus elongatum, subtiliter punctatum. Labrum permagnum, medio elongatum et fortiter bidenticulatum. Mandibulæ latissimæ. Caput collo angustissimo. Prothorax angulis anterioribus ad latera sitis, brevissime rotundatis. Prosternum elongatum.

This genus is distinguished from *Stilicus* by the labrum being longer in the middle and by the thick mandibles, by the very elongate penultimate joint of the maxillary palpi, and by the complete absence of the lateral angles from the sides of the thorax. The prosternum is very elongate, not concave, but carinate for its whole length. The antennæ are elongate. The legs long and rather robust. The sculpture is totally unlike that of *Stilicus*, being remarkably fine and obsolete. The basal joint of the hind foot is very elongate, longer than the terminal joint.

I am not acquainted with any species besides those here described.

1. **Eustilicus crassidens.** (Tab. XV. fig. 4.)

Fusco-niger, opacus, antennis pedibusque fusco-rufis, elytris ad summum basin sordide ferrugineis; capite prothoraceque opacis, fere invisibiliter punctulatis, illo subelliptico; elytris omnino densissime subtiliterque subscabroso-punctatis, absque punctis majoribus.

Long. 8 millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ rather elongate, extending nearly to the base of the thorax; third joint a good deal longer than the second. Head and thorax scarcely visibly punctured; eyes very small. Elytra with a remarkably dense, fine but scabrous punctuation. The male has the hind margin of the penultimate ventral segment broadly but slightly emarginate; that of the terminal segment is also broadly emarginate, but in a more rounded manner.

Two examples, found on the sandy banks of small streams.

2. **Eustilicus orbifer.**

Fusco-ferrugineus, capite nigricante, pedibus abdominisque apice sordide testaceis; capite prothoraceque opacis, omnino densissime subtilissimeque punctatis, illo suborbiculare; elytris densissime subtiliterque subscabroso-punctatis.

Long. 7 millim.

Hab. PANAMA, Bugaba (*Champion*).

This species is distinguished from *E. crassidens* chiefly by being rather less elongate, more pallid in colour, with a shorter head, and the punctuation of the latter and the thorax, though very fine, not so extremely obsolete.

The unique example is apparently a female.

3. **Eustilicus mexicanus.**

Latior, niger, opacus, antennis pedibusque fuscis; capite prothoraceque omnino opacis, fere invisibiliter punctulatis, illo suborbiculare; elytris omnino densissime subtilissimeque subscabroso-punctatis.
Long. $8\frac{1}{2}$ millim.

Hab. MEXICO, Misantla (*Höge*).

Antennæ short, not reaching to the base of the thorax; penultimate joint scarcely so long as broad. Head broad. Thorax with a very dull surface, without any distinct sculpture. Elytra covered with a very dense, fine, granular punctuation. Male with a broad deep emargination of the last ventral plate, and a very slight emargination of that preceding. Unique.

Readily distinguished from *E. crassidens* by the broader form, very dark colour, and shorter antennæ.

4. **Eustilicus gracilis.**

Gracilis, fusco-niger, opacus, pedibus fusco-rufis; antennis fuscis, apicem versus rufis; capite prothoraceque opacis, fere invisibiliter punctatis, hoc subovale; elytris omnino densissime subtilissimeque subscabroso-punctatis.
Long. 7 millim.

Hab. GUATEMALA, Tactic 5000 feet (*Champion*).

Very closely allied to *E. crassidens*, but of rather darker colour, more slender form, and with the punctuation of the head and thorax not quite so obsolete.

The unique example is a female.

TROCHODERUS.

Characteres fere ut in genere *Eustilico*, sed labrum medio multidenticulatum, mandibulæque tenuiores.

So far as I can detect, this genus agrees thoroughly with *Eustilicus*, except in the structure of the labrum and mandibles. The labrum is peculiar; it is large and prominent, though not quite to such an extent as it is in *Eustilicus*; and instead of having two large definite teeth in the middle, separated by a slight excision, it has a number of smaller less definite teeth; on each side of the middle are two teeth placed quite close together, and between them, exactly on the middle, a less prominent denticle; nearer to the side there is a still smaller denticle, separated by a considerable space from the two contiguous teeth.

1. **Trochoderus godmani.** (Tab. XV. fig. 5.)

Niger, opacus, antennis pedibusque fusco-rufis, dense obsoleteque punctatus; elytris punctis majoribus subseriatis impressis.
Long. 7–8 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ moderately stout; third joint a little longer than the second, the penultimate a little shorter than broad. Head subcircular, excessively densely and finely punctate, dull. Thorax longer than broad, a little narrowed behind, much narrowed in front, with a fine polished line along the middle quite vanishing in front. Elytra slightly longer than the thorax, densely and finely punctate, not quite so dull as the anterior parts; with some larger punctures along the suture and middle of each, and some still finer ones towards the sides. The male has a just perceptible emargination of the hind margin of the last ventral plate.

A good series was obtained. Sandy banks of streams (*Champion*).

2. **Trochoderus dubius.**

Fuscus, pedibus antennisque versus apicem sordide rufis; dense subobsoleteque punctatus, elytris punctis parum conspicuis impressis.
Long. 7 millim.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

So far as I can judge from a single immature example, this is a rather smaller and less elongate insect than *T. godmani*, with the punctuation not quite so dense and obsolete, and the front part of the thorax less elongate; the more pallid colour may be partly due to immaturity. Although so similar in appearance to *T. godmani*, I think the structure of the labrum will be found to be different and less complex, as the median teeth do not appear to be duplicate.

STILICUS.

Stilicus, Latreille, Règn. Anim. iv. p. 436; Er. Gen. et Spec. Staph. p. 629.

This genus is widely distributed in both the Old and the New Worlds; but, as yet, only about thirty-five species have been described. In some of the species of our region the tarsi are bilobed, but the lobes are so slender that they are not easily perceived in dried examples, and I have therefore not used the character for dividing the genus into sections.

1. **Stilicus angularis.** (Tab. XV. fig. 6.)

Stilicus angularis, Er. Gen. et Spec. Staph. p. 634[1].

Hab. NORTH AMERICA, Carolina[1].—MEXICO (*coll. Saunders*), Campeche (*Chevrolat*), Cordova (*Sallé*).

Of this distinct species we figure an individual from the Saunders collection.

2. **Stilicus cribratus.** (Tab. XV. fig. 7.)

Niger, antennis palpisque testaceis, pedibus pallide flavis, capite prothoraceque dense fortiterque rugoso-punctatis, hoc medio linea elevata lævigata exarato; elytris fortiter profundeque punctatis, nitidis.
Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala (*Sallé*), near the city, San Gerónimo, El Tumbador, Cahabon (*Champion*); Panama, David, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Head not very broad. Thorax rather slender, longer than broad, with the lateral angles very distinct, the portion in front of them elongate; the surface very convex transversely, and very densely and coarsely punctate, the smooth line down the middle very distinct. The elytra are longer than the thorax, and are remarkable on account of the coarse deep punctuation with shining interstices. The hind body is excessively finely punctate, shining, the three basal segments depressed at the base and more coarsely punctate in the depressions. The male has the hind margin of the last ventral segment feebly bisinuate, the median angle being very minute; the terminal segment has a rather small angular excision.

We have received only two examples from Mexico, both females; they have the thorax a little broader than the specimens from Guatemala and the State of Panama. The species is no doubt closely allied to the Colombian *S. carinatus*, Er.; but it would appear from Erichson's description that the male characters are more largely developed in that insect.

We have received a good series of this species; indeed it is apparently the only *Stilicus* at all common in our region. Our figure represents an individual from Guatemala city.

3. **Stilicus guatemalenus.**

Niger, subæneus, antennis palpisque testaceis, pedibus pallide flavis, capite prothoraceque dense fortiterque rugoso-punctatis, hoc medio linea lævigata elevata exarato; elytris fortiter profundeque punctatis, nitidis, punctis versus apicem evidenter subtilioribus.
Long. 6 millim.

Hab. Guatemala, near the city, San Gerónimo, Las Mercedes, Volcan de Atitlan 2500 feet (*Champion*).

This insect is very closely allied to *S. cribratus*, but is rather larger and has a broader head and thorax; the elytra are a little longer and their punctuation is not quite so coarse and deep, and on the apical fourth is evidently finer and more regular than elsewhere; the male has a much longer tooth in the middle of the emargination of the penultimate ventral segment.

This agrees with Erichson's description of *S. carinatus* even better than *S. cribratus* does; but as *S. guatemalenus* has been found only in Guatemala, and is apparently rare

there, it is in the highest degree improbable that it will prove to be identical with the above mentioned insect from Colombia.

Ten examples.

4. Stilicus cribripennis.

Nigro-subæneus, antennis fusco-testaceis, pedibus testaceis, femoribus apice, coxis anterioribus palpisque fuscis; capite prothoraceque dense fortiterque rugoso-punctatis, hoc medio longitudinaliter canaliculato; elytris dense profunde fortiterque punctatis, nitidis.

Long. $4\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Cerro Zunil 4000 to 5000 feet, Dueñas (*Champion*).

This species is readily distinguished from *S. guatemalenus* by the thorax being canaliculate along the middle instead of furnished with a polished raised space; the colour of the legs and palpi is also characteristic. The head and thorax are rather broad; the elytra short and broad, scarcely longer than the thorax, coarsely and very densely punctate, uneven. The male has a broad excision of the terminal ventral plate; the hind margin of the preceding segment simple.

The unique Mexican exponent is quite similar to the small series of Guatemalan individuals.

5. Stilicus nimborum.

Niger, minus ænescens, antennis fusco-testaceis, pedibus palpisque fuscis, femorum basi tarsisque testaceis; capite prothoraceque dense fortiterque rugoso-punctatis, hoc medio longitudinaliter canaliculato; elytris dense profunde fortiterque punctatis.

Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Quezaltenango 7800 feet (*Champion*).

We have received only one mutilated female of this species, and except for the colour of the legs it almost exactly resembles *S. cribripennis*; as this character is, however, of specific importance in this genus, I have no doubt the two will prove to be distinct.

6. Stilicus femoratus.

Niger, opacus, elytris subænescentibus, subnitidis, pedibus testaceis, femorum apicibus, antennis palpisque fuscis; minus gracilis, capite prothoraceque dense fortiterque rugoso-punctatis, hoc medio vix perspicue canaliculato; elytris crebrius minus fortiter punctatis.

Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Head broad, transversely subquadrate, excessively densely punctured, quite dull. Thorax broad, but distinctly narrower than the elytra, scarcely longer than broad, much narrowed in front; lateral angles distinct, with only an indistinct trace of a channel along the middle. Elytra broad and short, about as long as the thorax, finely

but deeply punctate, smoother on the basal part, and with an elevation on each side near the base. Legs rather stout, yellow, with a definite infuscation of the apices of the femora. The male has a slight broad emargination of the last ventral plate.

Though similar in the colour of the legs to *S. cribripennis*, *S. femoratus* has a broader thorax, almost without channel along the middle, and more finely punctate wing-cases. Unique.

7. **Stilicus simplex.**

Niger, opacus, antennis, palpis pedibusque testaceis, coxis fuscis; minus gracilis, prothorace lato, medio obsolete canaliculato; elytris densissime punctatis.

Long. 5 millim.

Hab. GUATEMALA, near the city (*Champion*).

Head broad and short, excessively densely punctate. Thorax broad, but distinctly narrower than the elytra, about as long as broad, very densely punctate, and with a very indistinct channel along the middle. Elytra broad and short, slightly longer than the thorax, and of a rather more fuscous colour than the anterior parts, and scarcely so dull, though very densely, evenly, and rather deeply punctate. Legs stout, yellow. The male has a very slight gradual emargination of the hind margin of the last ventral plate.

Only two examples have been obtained.

8. **Stilicus chiriquensis.**

Niger, antennis, palpis pedibusque testaceis, coxis fuscis; capite prothoraceque dense fortiterque punctatis, fere opacis, hoc sat lato, medio minus distincte canaliculato; elytris sat nitidis, crebrius subtiliter punctatis.

Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

This species has a broad, short, very densely punctate head, and a moderately broad thorax, only obsoletely canaliculate along the middle. The elytra are short and broad, shining, distinctly and finely, though by no means densely, punctate, with an elevation near the base on each side of the suture, and a shallow longitudinal depression external to this; they are not longer than the thorax. The male has a shallow angular excision on the last ventral segment.

Readily distinguished from *S. simplex* by the shining, less densely punctate elytra.

Seven examples.

9. **Stilicus rugicollis.**

Elongatus, niger, elytris subæneis, antennis pedibusque testaceis, palpis femorumque posteriorum apicibus fuscis, coxis nigris; prothorace elongato, angulis lateralibus prominulis, omnino fortiter rugoso-punctato; elytris dense sat fortiter substrigoso-punctatis.

Long. 6–$6\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ with the five or six basal joints slightly infuscate. Head broad, excessively densely punctate. Thorax elongate, much longer than broad, with the lateral angles unusually distinct; the sculpture excessively coarse, especially at the sides. Elytra closely punctate, the punctuation rather indefinite and peculiar owing to many of the punctures being confluent in the longitudinal direction; the surface towards the base is uneven; they are not longer than the thorax. Hind body very densely and finely punctate. Legs long; tips of the hind femora infuscate. The male has a large excision on the apical ventral segment.

Four examples were procured of this very distinct species.

10. **Stilicus bidens.**

Latiusculus, niger, subæneus, elytris fusco-æneis apicibus testaceis, antennis palpisque rufis, pedibus cum coxis testaceis; prothorace rugoso-punctato, medio anguste profundeque canaliculato; elytris politis, parce obsoleteque punctatis.

Long. 6½ millim.

Hab. GUATEMALA, near the city, Cerro Zunil 4000 to 5000 feet (*Champion*).

Head densely and coarsely punctate, the interstices longitudinally strigose. Antennæ with the penultimate joint not broader than long. Labrum acutely bidenticulate in the middle. Thorax not large, much narrower than the elytra, longer than broad, much narrowed behind, the lateral angles entirely round; surface extremely coarsely punctate, with a very distinct longitudinal channel along the middle. Elytra evidently longer than the thorax, very shining, with very fine distant punctures; the hind margin yellow, more broadly so at the outer angle.

This resembles the European species of the genus, and, like them, has the labrum conspicuously bidentate.

Only two examples have been found, both females.

11. **Stilicus muticus.** (Tab. XV. fig. 8.)

Nigro-æneus, elytrorum apice, antennis, palpis pedibusque cum coxis testaceis; capite prothoraceque dense punctatis, hoc medio argute canaliculato; elytris crebre sat subtiliter profunde punctatis.

Long. 4½ millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Head suborbiculate, rather slender; penultimate joint of the antennæ shorter than broad. Labrum not visibly denticulate. Thorax broad, rather longer than wide, densely punctate, and very distinctly canaliculate along the middle. Elytra slightly longer than the thorax, rather shining, distinctly but not densely punctate, impressed within the shoulders; hind margin very conspicuously yellow. Legs slender. Male with a rather narrow excision on the last ventral segment, and the hind margin of the penultimate segment very indistinctly bisinuate.

Three examples.

12. **Stilicus dissimilis.**

Niger, subopacus, pedibus fusco-testaceis, femoribus ex parte majore testaceis ; capite prothoraceque densissime punctatis, hoc medio subtiliter canaliculato ; elytris crebrius subtiliter punctatis, subnitidis, angulo apicali externo flavescente ; tibiis anterioribus subincrassatis.
Long. 4 millim.

Hab. Guatemala, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ short, much thickened externally, the penultimate joints strongly transverse. Labrum with two very prominent teeth in the middle. Head elongate, densely rugose-punctate. Thorax broad and short, very densely rugose-punctate. Elytra much longer than the thorax. Front tibiæ thicker than usual, rounded externally. Underside of the head very densely and coarsely punctate.

This very distinct species is unique ; the example obtained being a female.

SUNIOCHARIS.

Corpus angustulum ; facies quasi *Suniorum*. Caput posterius truncatum, collo sat angusto. Tarsi omnes tenuiores ; anteriores nullo modo dilatati, posteriores articulo basali quam secundus fere duplo longiore.

This genus is not only remarkable from its resemblance to *Sunius*, but has really the tarsi constructed to a certain extent like those of that genus, though owing to their great tenuity this is very difficult to perceive ; the terminal joint is, however, inserted above the fourth joint very near the base of the third ; as the fourth joint is thus placed underneath the terminal one, and is not wider than it, the foot appears to be only 4-jointed. The mandibles are short, acutely tridentate ; the labrum is large, very indistinctly bidenticulate in the middle. The neck is not so narrow as in *Lithocharis* ; the thorax has the front margin only gently curved so that the form is quadrangular. The prosternum is large, the prosternal process is elongate, and the side pieces large. The front femora are rather dilated. The basal ventral segment is carinate at the base.

1. **Suniocharis modesta.** (Tab. XV. fig. 9.)

Angustula, ferruginea, elytris dilutioribus, abdomine obscuriore, pedibus flavis ; capite prothoraceque opacis, fere impunctatis ; elytris dense subtilissimeque punctatis.
Long. 4 millim.

Hab. Mexico, Cordova (*Sallé*), Mirador (*Höge*) ; Guatemala, Mirandilla (*Champion*) ; Nicaragua, Chinandega, Managua (*Sallé*) ; Panama, David, Bugaba, San Miguel in the Pearl Islands (*Champion*).

Antennæ small and slender ; ninth and tenth joints distinctly longer than those preceding, the tenth a little longer than broad, the terminal joint still longer. Head nearly as broad as the thorax, straight at the sides and quite truncate behind, excessively obsoletely punctured. Thorax about as long as broad, very slightly narrowed behind, the sides a little curved, impunctate, but quite dull, with the marginal setæ black

and distinct. Elytra rather longer than the thorax. Hind body slender, ferruginous brown, acuminate behind, excessively densely and finely punctate.

Mr. Champion met with half a dozen specimens in the Pearl Islands, but from each of the other localities we have only one or two examples. The individual figured was found at David. Found on the sandy banks of small streams.

2. Suniocharis nigrescens.

Angustula, fusco-nigra, opaca, antennis pedibusque testaceis; capite prothoraceque impunctatis; elytris densissime subtilissimeque punctatis.

Long. 5 millim.

Hab. Guatemala, Capetillo (*Champion*).

This insect is very closely allied to *S. modesta*, but is larger and is readily distinguished by the dark colour; it also has rather longer elytra.

Only two examples were met with, exhibiting no sexual marks.

3. Suniocharis fragilis.

Fuscescens, prothorace elytrisque ferrugineis, antennis pedibusque testaceis; antennis sat elongatis; capite prothoraceque fere impunctatis, opacis; elytris dense punctatis.

Long. $4\frac{3}{4}$ millim.

Hab. Mexico, Cordova (*Höge*).

Antennæ rather slender, with evident exserted setæ on the basal joints, the penultimate joint longer than broad. Head subtruncate behind, the eyes small; surface dull, but at the hind angles brighter and minutely rugose. Thorax about as long as broad, the base and hind angles greatly rounded, very dull, without perceptible sculpture. Elytra flat, slender, longer than the thorax, more pallid in colour towards the extremity than at the base, closely and finely punctate, rather shining. Hind body fuscescent, sordid testaceous towards the extremity.

We have obtained only one mutilated individual (apparently a female) of this species. I am not at all sure that it can be correctly included in *Suniocharis*, as the antennæ and mandibles are more elongate, and the labrum is very distinctly bidenticulate. Possibly it may form a genus between *Suniocharis* and *Suniotrichus*.

SUNIOTRICHUS.

Antennæ tenues, setis elongatis munitæ, articulo secundo quam tertius haud crassiore. Labrum magnum, medio longius bispinosum. Tarsi filiformes, articulo quarto superne vix perspicuo, subtus sub articulo quinto in lobo tenui producto.

This very distinct genus is allied to *Medon* rather than to *Sunius*, although in appearance and in the structure of the feet it comes nearer to the aberrant species of the latter genus comprised in the group of which *S. latus*, Rosenh., may be taken as the type. The prothorax is constructed like that of *Medon*, the coxal cavities being quite

open behind, and the prosternal process laterally compressed and attaining the front of the mesosternum. The mandibles are rather long, and are each armed with three elongate teeth. The pseudo-terminal joint of the maxillary palpi is remarkably elongate and slender. The head is constricted behind to form a narrow very abrupt neck. The front tarsi are quite simple. The hind tarsi are quite slender; the basal joint elongate, equal to the second and third together; the fourth joint is quite half the length of, though scarcely broader than, the terminal one, and prolonged beneath it in the form of a slender lobe closely adapted to the joint, and therefore almost invisible from above.

I am not acquainted with any other species of the genus than those here described.

1. **Suniotrichus capillaris.** (Tab. XV. fig. 10.)

Ferrugineo-brunneus, antennis, palpis pedibusque testaceis, illis nigro-setosis; obsolete punctatus, subopacus; capite subquadrato, posterius emarginato.
Long. $5\frac{1}{4}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ slender and rather short, furnished with elongate exserted black setæ; first joint much stouter than the following. Head transversely subquadrate, the vertex broad, emarginate, the angles not rounded, the eyes placed at the front; surface almost unsculptured, dull. Thorax strongly transverse, narrowed behind, with the base rounded, and the front margin produced and rounded in the middle; quite dull, not visibly sculptured. Elytra longer than the thorax, closely and finely asperate-punctate, not quite so dull as the head and thorax. Hind body acuminate behind, excessively finely punctate.

Found on the sandy banks of streams (*Champion*).

2. **Suniotrichus sordidus.**

Fusco-ferrugineus, pedibus palpisque testaceis; subtiliter granuloso-punctatus, subopacus; antennis longis, nigro-setosis, extrorsum pallide flavis; capite suboblongo, posterius emarginato.
Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

The antennæ are dark at the base, with the apical joints sordid white, very slender, and furnished with very long hairs. The head is covered with a distinct granular punctuation, and the thorax with a very fine, dense granulation. The apices of the hind femora are infuscate.

So far as I can judge from a single very decayed example, this, though allied to *S. capillaris*, is a quite distinct species.

3. **Suniotrichus puncticollis.**

Ferrugineus, sat nitidus, antennis, palpis pedibusque flavis, illis nigro-setosis; capite subtransverso, vertice medio profundius emarginato; prothorace fortiter, irregulariter impresso-punctato.
Long. $4\frac{1}{2}$ millim.

Hab. Panama, David (*Champion*).

Antennæ short and slender, pallid yellow, furnished with long black setæ. Head broad and short, very deeply emarginate behind; the surface finely and closely asperate-punctate, smoother and slightly shining on the middle. Thorax rather strongly transverse, the base rounded, the front oblique on each side, truncate in the middle, with a coarse not deep punctuation. Elytra much longer than the thorax, shining, closely and deeply punctate.

This species is represented only by one example in a decayed state, but it is very distinct; indeed the front of the thorax is almost sufficiently different in shape to warrant the insect being generically separated.

MONISTA.

Monista, Sharp, Trans. Ent. Soc. Lond. 1876, p. 271[1].

This genus consists of four or five Neotropical species, in addition to those of our region. In my diagnosis of the genus [1] the fourth joint of the tarsus is erroneously said to be "bilobo-membranaceo"; this should be corrected to "lobo-membranaceo." This error has been already pointed out by Arribálzaga (*cf.* Bol. Ac. Arg. vii. p. 285); this savant is no doubt correct in pointing out that *Sunius troglodytes* and *S. pusio*, Er., belong to this genus; on the other hand his suspicions that *Styliderus*, Motsch., may be the same as *Monista* are, I have no doubt, erroneous.

1. **Monista concolor.** (Tab. XV. fig. 11.)

Ferrugineo-brunnea, antennis articulis 4° ad 9^{m} nigricantibus; capite prothoraceque dense fortiterque punctatis.

Long. 4½ millim.

Hab. Guatemala, near the city, Zapote, Coatepeque, Cerro Zunil, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ a little thicker externally, the two or three penultimate joints transverse. Head rather narrow, much rounded behind the eyes, so that the vertex is quite narrow; coarsely and closely punctate. Thorax globose, scarcely so long as broad, closely and coarsely punctate. Elytra much longer than the thorax, convex, almost impunctate, the hind margin only indistinctly flavescent. The male has the terminal ventral segment broadly and deeply excised behind.

This species may be placed at the head of the genus; it is more robust in build than any other. Mr. Champion obtained nearly a score of specimens in the vicinity of the City of Guatemala, and eight on the Volcan de Chiriqui, but the other localities have each yielded only one or two examples. The specimens exhibit some variation in size and in the outline of the head and thorax, but I cannot at present distinguish more than one species. Our figure represents a typical example from the Volcan de Chiriqui.

2. **Monista similis.**

Ferrugineo-brunnea; antennis brevibus, nigricantibus, apice testaceo; palpis, pedibus elytrorumque apice flavis; capite prothoraceque dense fortiter punctatis.
Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, Zapote, La Tinta (*Champion*).

This insect is very similar to *M. concolor*, but besides being smaller than the smallest variety of that species, it has also the elytra considerably shorter and distinctly flavescent at the hind margin. It is equally close to the Brazilian *M. typica*, but has stouter and darker antennæ and a more densely punctured thorax. We have received only one example from each locality; in one of them the antennæ are darker than they are in the other, possibly the result of decay.

3. **Monista plagiata.**

Ferruginea, antennis fuscis, basi et articulo ultimo, palpis pedibusque testaceis; elytris apice vage testaceo, ad latus plaga magna nigricante.
Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, David, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ with the two or three basal and one or two apical joints yellow, the rest dark. Head rather small, rounded behind, rather sparingly punctured. Thorax rather small, about as long as broad, globose, rather sparingly punctate, with a broad line along the middle impunctate. Elytra much longer than the thorax, very obsoletely punctate, the apex yellow, a large dark mark, rather indefinite, on the side of each, fading away towards the suture. Hind body testaceous.

The place of this species is between *M. typica* and *M. longula*. We have received a series of nine examples from David, and one from the Volcan de Chiriqui; this latter may possibly, however, prove to be a different species, as it differs in several of the minuter details.

4. **Monista strigicollis.**

Brevis, fusco-ferruginea, antennis, palpis, pedibus, elytrorum abdominisque apicibus testaceis; capite posterius truncato-emarginato, cumque prothorace fortiter strigoso-punctatis.
Long. 3 millim.

Hab. PANAMA, David (*Champion*).

Antennæ yellow, immaculate, short and rather stout, the joints from the fourth to the tenth each broader than long. Head subquadrate, not narrowed or rounded behind, the vertex a little emarginate; the surface reticulately sculptured, almost as in the genus *Sunius*. Thorax transversely subglobose, rather coarsely, strigosely sculptured. Elytra longer than the thorax, densely and distinctly punctured, the apex broadly though rather indefinitely yellow. Legs short.

Of this distinct species only one example was obtained.

5. **Monista diffinis.**

Ferruginea, capite prothoraceque obscurioribus, abdominis apice dilutiore; elytris quam prothorax vix longioribus, fascia mediali ad suturam interrupta nigra; capite prothoraceque strigosis.
Long. 3 millim.

Hab. Guatemala, San Juan in Vera Paz (*Champion*).

Head subquadrate, truncate behind, strigosely sculptured; antennæ immaculate. Thorax about as long as broad, not altogether globose, the sides being very obtusely angular, the surface rather coarsely strigose. Elytra densely punctate.

Of this species only a single badly preserved example has been obtained; it is a much narrower insect than *M. strigicollis*, and differs in many other details, the form of the head being, however, similar in the two.

6. **Monista picturata.** (Tab. XV. fig. 12.)

Elongata, angusta, nigra, elytrorum macula basali, fascia lata apicali flammulata, abdominis apice pedibusque flavis, tibiis fuscescentibus, antennis palpisque fusco-testaceis, illis basi testaceis.
Long. vix 4 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ shorter than the head and thorax, a little thicker towards the apex, the five basal joints yellow, the others infuscate; palpi yellow, a little infuscate. Head narrow, rounded and narrowed behind the eyes, so that the vertex is very narrow, indistinctly punctured. Thorax narrow, very convex transversely, rounded at the sides, rather longer than broad, indistinctly punctured. Elytra longer than the thorax, black; each with a large humeral spot, and a broad apical band (extending further forwards near the suture, yellow); indistinctly punctate. Hind body very finely, scarcely perceptibly punctate.

The only example found of this very distinct species is in fragments, but I have restored it sufficiently for delineation.

Group **SUNIINA.**

I propose to include in this group all the genera of Pæderinæ that have the roof over the anterior coxæ entirely corneous behind; this character, for taxonomical purposes, is evidently of superior importance to the structure of the tarsi. The group will consequently (like the Lathrobiina) include genera with simple filiform tarsi, and others with the fourth tarsal joint, and sometimes the third also, furnished with a membranous lobe beneath.

ECHIASTER.

Echiaster, Erichson, Gen. et Spec. Staph. p. 620.

This is a New-World genus numerously represented in South America; one or two

species also inhabit North America. Only sixteen species are described, and most of these are from the Amazon valley; eight inhabit Central America. These insects are found on the sandy banks of streams (*Champion*).

1. **Echiaster solitarius.**

Elongatus, fuscus, capite prothoraceque ferrugineis, elytris ad basin flammulatim testaceo-signatis, antennis pedibusque flavis.
Long. 5 millim.

Hab. Panama, David (*Champion*).

Antennæ about as long as the head, a little thicker externally; third, fourth, and fifth joints longer than broad, the sixth small, as long as broad, the penultimate joint slightly transverse. Head opaque, longer than broad, the sides curvate behind the eyes. Thorax very long, twice as long as broad, only one half the width of the elytra, much narrowed in front, less so behind, not impressed, and like the head coarsely but indistinctly sculptured. Elytra rather longer than the thorax, remarkably coarsely punctured; fuscous, with two basal longitudinal marks, the inner one extending further backwards than the outer. Hind body with the four basal segments very coarsely sculptured, fuscous, the next segment smooth, black.

This insect is allied to the Amazonian *E. signatus*, but is smaller and more coarsely sculptured, with the head narrower, and more curvate at the sides. Unique.

2. **Echiaster filum.** (Tab. XV. fig. 13.)

Elongatus, angustus, opacus, testaceus, elytris dimidio apicali nigro, abdomine ad apicem fusco variegato.
Long. 3 millim.

Hab. Guatemala, Panzos, Coatepeque (*Champion*); Nicaragua, Chontales (*Janson*).

Antennæ short, the four penultimate joints strongly transverse, the third, fourth, and fifth joints small. Head large, rather broad, subtruncate behind, the hind angles rounded, the eyes placed at the middle of the sides, densely and finely sculptured, dull. Thorax rather small, longer than broad, only about one half the width of the head, obscurely carinate along the middle. Elytra a little longer than the thorax, festooned behind with black. Hind body very slender and elongate, quite finely sculptured, the penultimate segment in greater part infuscate, the terminal segment with fuscous hairs behind.

Three examples.

3. **Echiaster orbifer.**

Testaceus, opacus, confertissime punctatus, abdominis segmentis duobus ultimis nigris; capite lato, orbiculato, oculis magnis.
Long. 3 millim.

Hab. Panama, San Miguel in the Pearl Islands (*Champion*).

Antennæ short, the penultimate joints rather strongly transverse. Head rather broader than the elytra, nearly circular; eyes large, occupying the greater part of the sides. Thorax much longer than broad, subovate, gently curved and quite without angles at the sides, unimpressed. Elytra considerably longer than the thorax, dilutely fuscescent. The two terminal segments of the hind body tubular, quite black.

Two examples.

This agrees in most respects with Erichson's description of *E. melanurus*, but is, I think, a different species.

4. Echiaster minutus.

Brevior, ferrugineo-testaceus, antennis pedibusque testaceis, illis brevibus, clavatis; prothorace quam latitudo paullo longiore; abdomine apice summo nigricante.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*).

Antennæ very short, the penultimate joints very strongly transverse. Head suboblong; the eyes rather small, placed at the middle of the sides, the vertex slightly emarginate. Thorax curved at the sides, narrowed behind, but little prolonged in front, longitudinally but obsoletely raised along the middle, quite dull, like the head densely, almost imperceptibly sculptured. Elytra a good deal longer than the thorax, densely and very finely sculptured, very slightly infuscate behind. Hind body not elongate, attenuate behind, the sixth and seventh segments clothed with black hairs; legs short.

In this minute but distinct insect the labrum is less prominent than usual, and the lateral denticles are excessively minute.

Two examples from Guatemala, one from Nicaragua.

5. Echiaster championi. (Tab. XV. fig. 14.)

Brevior, ferrugineo-testaceus, antennis pedibusque testaceis, illis brevibus, clavatis; capite subquadrato, oculis convexis; prothorace quam latitudo vix longiore, longitudinaliter obsolete bisulcato.

Long. 3 millim.

Hab. GUATEMALA, near the city, Zapote (*Champion*).

Very closely allied to *E. minutus*, but with a more quadrate head and considerably larger eyes; the thorax slightly broader and distinctly bisulcate.

6. Echiaster funebris.

Niger, brevissime griseo-pubescens, densissime sculpturatus, peropacus; antennis pedibusque sordide testaceis, illis crassis.

Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ short, thick, the penultimate joints very strongly transverse. Head wide, nearly as broad as long, the vertex rounded, the eyes convex, the surface extremely densely

punctured. Thorax about as broad as long, much narrowed behind and in front, convex, subglobose, very densely sculptured, almost unimpressed. Elytra broad, much wider and rather longer than the thorax, very densely sculptured. Hind body rather broad, the penultimate segment not tubular.

One example, in very decayed condition.

In this distinct species the labrum has a median angular notch, and a smaller notch on each side.

7. **Echiaster curtus.**

Brevior, ferrugineus, elytris dimidio apicali nigro; capite suboblongo, prothorace latiusculo, bisulcato.
Long. 3 millim.

Hab. GUATEMALA, El Reposo (*Champion*).

This insect seems to occupy an intermediate position between the true species of *Echiaster*, which have one or two of the terminal segments more or less tubular in structure, and the following one, in which this part of the body is of the form usual in the subfamily: in *E. curtus* the terminal segments are rather broad, and not elongate, but their sculpture and clothing are similar to that existing in the species where the form of these segments is more elongate; also, as in these latter, the penultimate segment is only finely margined, and the terminal one is not margined. In *E. curtus* the head is suboblong in form, almost subquadrate, and the moderately small eyes are placed far from the front. The thorax is about as long as broad, much narrower than the elytra, much narrowed behind, and with two longitudinal depressions, separated by a broad and feeble elevation. The elytra are broad and short, a little longer than the thorax. The sculpture throughout is very fine and indistinct, the surface quite dull, the two terminal segments clothed with dark hairs. The labrum is acutely quadri-denticulate, the two lateral teeth much shorter than the median pair.

The unique example is in bad preservation.

8. **Echiaster lativentris.** (Tab. XV. fig. 15.)

Nigricans, confertissime punctatus, opacus; prothorace vel rufescente vel nigro; elytris disco late angulariter rufo-signato; abdomine lato, apice obtuso, segmentis basalibus parce flavo-setulosis; antennis pedibusque rufis.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo, Las Mercedes, Cerro Zunil, El Reposo (*Champion*).

Antennæ short, not much thickened externally; penultimate joint not transverse, those preceding it shorter, transverse. Head suborbiculate, the eyes rather large and convex. Thorax moderately narrow, longer than broad, much narrowed behind, longitudinally elevated along the middle, and sulcate on each side, very dark red, or black. Elytra short and broad, scarcely longer than the thorax; with a large subtriangular rufescent mark on the disc, the base of the triangle extending across the elytra and

just behind the scutellum, while the apex is on the suture at the extremity; the basal part of this mark is more pallid than the apical portion, this latter being rather vaguely limited. The three basal segments of the hind body sparingly clothed with shining flavescent hairs, the terminal segments not at all tubular in form.

One example from each locality.

Although this species is very different in appearance from the more typical forms of *Echiaster*, the difference probably being chiefly due to the complete absence of the tubular structure of the apical segments, yet I cannot observe any character that would justify the establishment of a distinct genus, some of the other species being intermediate as regards the abdominal structure. The labrum in *E. lativentris* is acutely quadri-denticulate.

ZONASTER.

Labrum latum, haud elongatum, medio denticulis duobus approximatis, inter ea angulariter excisum, utrinque denticulo minuto. Mandibulæ perelongatæ, graciles; sinistra tri-, dextra quadridentata; dentibus basalibus minutis. Prothorax antrorsum rotundatus. Tarsi tenuiores, filiformes, articulo quarto brevissime lobato.

Although very different in appearance from *Echiaster*, the characters mentioned above bring the unique insect for which I propose this new generic name near to that genus. The front coxal cavities are entirely corneous. The neck of the head is very abrupt, but not so slender as in *Echiaster*; this character, the greater number of teeth on the mandibles, and the fact that the fourth tarsal joint is undoubtedly though very slightly lobed beneath, distinguish the genus from *Echiaster*, and indicate that *Zonaster* links *Echiaster* with the group of genera allied to *Sunius*, from all of which it is distinguished by the very imperfect lobation of the fourth joint of the tarsi; so rudimentary, indeed, is this lobation, that it requires a careful examination to detect it.

1. **Zonaster optatus.** (Tab. XV. fig. 16.)

Angustulus, nigricans, nitidus, capite prothoraceque piceis, antennis, palpis mandibulisque testaceis, tibiis tarsisque albidis; elytris pone basin fascia transversa testacea.

Long. 4½ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ slender, slightly thicker externally, the third joint longer and thinner than the second. Head subquadrate, very densely and rugosely sculptured. Thorax about as long as broad, much narrowed behind, the front margin with three minute denticles on each side, the surface very densely and rugosely sculptured; rufescent in front, blacker behind. Elytra flat, rather longer than the thorax, coarsely punctate, shining, with a very distinct yellow fascia behind the base. Legs slender, the very pallid tibiæ and tarsi contrasting abruptly with the black femora. Unique.

SUNIUS.

Sunius, Erichson, Käfer Mark-Brand. i. p. 523.
Sunius (genuini), Erichson, Gen. et Spec. Staph. p. 637.
Mecognathus, Wollaston, Ins. Mader. p. 595 (1854).

This genus is at present an extensive one, comprising over one hundred described species. It is a very difficult one to treat, owing to the want of accord as to the validity of genera that have been described as allied to it, and also to the fact that it actually includes more than one valid genus. I find that *Dibelonetes* and *Stilicopsis* can be accepted as valid, and by separating them the genus is left in a much more satisfactory condition; and I therefore treat them as distinct in the following pages. All the species placed by Erichson in his section "*Sunius spurii*" are to be removed from the genus, and it will be found that I have enumerated in the remarks on other genera what appear to be their correct positions according to my views. As I propose to limit it, the genus is still a very extensive one and distributed over most parts of the world; it appears to be nowhere better represented than it is in Tropical America.

The Munich Catalogue of Coleoptera credits the genus to Stephens; but that author's *Sunius* contains no species of the genus, and the name must therefore be regarded as due to Erichson.

1. **Sunius longinasus.** (Tab. XV. fig. 17.)

Elongatus, perangustus, nigerrimus, antennis, palpis pedibusque pallide flavis; capite posterius angustato, ante oculos prolongato.
Long. 6–6½ millim.

Hab. Panama, Bugaba, David (*Champion*).

Antennæ very slender and elongate, the penultimate joint several times longer than broad. Head elongate, dull, covered with very fine thread-like reticulations, the eyes placed at a considerable distance behind the insertion of the antennæ, the sides behind the eyes considerably narrowed to the neck. Thorax very elongate and slender, quite twice as long as broad, sculptured like the head. Elytra about as long as the thorax, closely, coarsely, and deeply punctured, slightly shining. Hind body very long and narrow, coarsely punctured. The male has an elongate, polished, depressed space on the penultimate ventral plate, and a deep angular excision on the following segment, the greater part of the excision being occupied by a pallid membrane.

Of this very distinct species a series of ten examples was obtained. Our figure is taken from a female.

2. **Sunius cognatus.**

Elongatus, angustus opacus, niger, griseo-pubescens, antennis, palpis pedibusque pallide flavis; capite suboblongo.
Long. 5½ millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ about as long as the head and thorax. Head elongate, the eyes placed at the middle of the sides, the pterygia very conspicuous; densely punctate. Thorax as broad as the elytra, longer than wide, much narrowed behind, sculptured like the head. Elytra rather longer than the thorax, densely covered with a rough granular sculpture. Hind body rather densely punctured and pubescent.

This insect somewhat resembles the European *S. anguinus*, but is larger and much more elongate, with longer head, distinct pterygia, and very much longer and more slender antennæ. The male has a deep sharply defined excision on the last ventral segment; the hind margin of the preceding segment is very slightly emarginate in the middle, and the emargination is studded with excessively minute bristles, so as to be file-like.

3. **Sunius vilis.**

Elongatus, angustus, opacus, niger, griseo-pubescens, antennis, palpis pedibusque pallide flavis; capite suboblongo, convexiusculo.
Long. 5 millim.

Hab. Guatemala, Las Mercedes 3000 feet, Cerro Zunil 4000 to 5000 feet, Sabo (*Champion*).

The description of *S. cognatus* applies to this species, except that in *S. vilis* the pterygia are not developed. Compared with *S. anguinus*, *S. vilis* is larger and more elongate, with much longer elytra, and considerably longer anterior part of the thorax. The male has an angular excision on the hind margin of the last ventral segment.

Only one example has been procured of this species in each of the localities mentioned.

4. **Sunius filiventris.**

Elongatus, omnino angustus, opacus, niger, griseo-pubescens; antennis, palpis pedibusque pallide flavis, illis extrorsum fuscescentibus; capite suboblongo.
Long. 5½ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species also is closely allied to *S. cognatus*, but is remarkable on account of its very slender form, the hind body being remarkably narrow; it differs also from *S. cognatus* in several other particulars. The antennæ are very long and slender, longer than the head and thorax, with the five or six outer joints infuscate. The eyes are convex, placed at the middle of the sides. The elytra are conspicuously longer than the thorax, and are a little narrowed towards the hind margin. The male has only a small excision on the last ventral segment. Unique.

5. **Sunius substrictus.**

Elongatus, angustus, abdomine apicem versus paullo latiore, ferrugineus, antennis pedibusque pallide flavis, abdomine ante apicem nigricante; elytris angustis, quam prothorax paullo longioribus et fere angustioribus.
Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

Var. Plus minusve nigro suffusus, corpore interdum toto nigro.

Hab. PANAMA, Volcan de Chiriqui 4000 to 8000 feet (*Champion*).

This species is closely allied to *S. cognatus*, but the head is without the conspicuous development of pterygia seen in that species; while from *S. vilis* the present insect is distinguished by the less parallel form, the elytra being a little narrower than the thorax, and the hind body more distinctly dilated from the base to beyond the middle. The male has a deep excision on the last ventral segment.

The few examples found are unfortunately in very bad preservation. The two found at the elevation of 8000 feet agree in colour, and I have regarded them as the typical form: at the lower elevation three examples were found, and they all differ a little in colour; two of them are, I think, nevertheless, certainly the same species, but the one in which the body is entirely black may be distinct.

6. **Sunius subtilis.**

Elongatus, angustus, niger, opacus, antennis, palpis pedibusque pallide flavis, elytrorum apice testaceo marginato; abdomine dense subtiliter punctato.
Long. $5\frac{1}{4}$ millim.

Hab. MEXICO, Teapa (*Pilate*).

Head oblong, broader than the thorax, densely and strigosely sculptured. Thorax rather broad, longer than wide, much narrowed behind and much rounded in front, densely and strigosely sculptured. Elytra a little longer than the thorax, slender, slightly narrower at the apex, the hind margin with a slender linear band of testaceous colour, densely asperate-punctate. Hind body slender, at the base very slender, densely and finely punctate.

I have only a female, in bad condition, of this species, obtained from Chevrolat's collection, where it was labelled *S. prolixus*, Er.; but it is not likely to be that insect. It is allied to the European *S. filiformis*, but the head has distinct pterygia at the insertion of the antennæ; the areolets formed by the sculpture of the head and thorax are much larger; the thorax is more slender and more narrowed behind; the hind body is more constricted at the base, and rather more finely punctate.

7. **Sunius signatellus.**

Perangustus, nigricans, antennis, palpis pedibusque pallide flavis, elytris sutura posterius margineque apicali testaceis; abdomine perangusto, lineari, dense obsoleteque punctato.
Long. $4\frac{1}{2}$ millim.

Hab. Mexico, Teapa (*Pilate*).

This insect is closely allied to *S. subtilis*, but is considerably smaller; the elytra are yellow behind, and the yellow colour extends forwards along the suture for about two-thirds of the length. The hind body is very slender and almost linear, quite finely punctate. The male has a deep narrow excision on the last ventral plate.

This is also known to me only by one exponent, obtained from Chevrolat's collection, where it was labelled *S. limbatus*, Er., an evidently erroneous determination.

8. **Sunius centralis.**

Sat angustus et elongatus, dense fortiter punctatus, subopacus, niger; antennis, palpis, pedibus elytrorumque margine posteriore pallide flavis.

Long. $4\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ very long and slender, rather longer than the head and thorax. Head sub-oblong, broad, dilated in front, and with distinct pterygia; eyes convex, placed almost behind the middle of the sides; the surface sculptured with fine thread-like reticulations. Thorax rather small, considerably narrower than the head or the elytra, much longer than broad. Elytra rather broad, slightly longer than the thorax, densely and deeply punctate, a little shining, the posterior portion definitely pale.

A single female only has been procured.

9. **Sunius pilatei.** (Tab. XV. fig. 18.)

Nigricans, antennis, palpis pedibusque pallide flavis, elytris testaceis, ad latera nigris; abdomine fortiter punctato.

Long. 4 millim.

Hab. Mexico, Teapa (*Pilate*); Guatemala, Zapote, San Isidro (*Champion*).

Head broad, evidently broader at the distinct pterygia; eyes convex; vertex narrow. Thorax rather slender, much longer than broad, greatly narrowed behind, like the head covered with a reticulate sculpture. Elytra scarcely longer than the thorax, coarsely punctate. Hind body rather broad, broader behind, bearing coarse deep punctures arranged rather irregularly in a transversely linear manner; with a scanty but rather long griseous pubescence. The male has the penultimate ventral segment flattened and polished along the middle, and a rather broad and short excision at the extremity of the last segment.

Mr. Champion obtained a small series of this species. The Mexican exponents are from Chevrolat's collection, where one was labelled *S. pilatei*, Chevr., and a second (immature) *S. lateralis*, Er. Fauvel had corrected the error as to the latter example by uniting it with the other under the name *S. lineiventris*, Fauv., ined. Having thus two names to choose from, I have elected to preserve the older.

10. **Sunius sanctus.**

Ferrugineus, antennis, palpis pedibusque pallide flavis, elytris ad latera nigro maculatis; abdomine dense subtiliter punctato, segmento penultimo nigro.

Long. 4½ millim.

Hab. GUATEMALA, San Gerónimo, El Jicaro (*Champion*).

Antennæ long and slender. Head oblong; pterygia distinct; eyes convex, placed almost nearer the vertex than the front. Thorax rather broad, as wide as the elytra, longer than broad, much narrowed behind, covered like the head with a fine reticulate sculpture. Elytra slender, longer than the thorax, a little narrower at the hind margin, more flavous in colour than the head or thorax, rather coarsely punctate, with a somewhat angular dark mark on the middle of the side extending nearer to the apex than to the base. Hind body very slender, slightly narrower at the base, closely and rather finely punctate; the penultimate segment black. The male has a small excision at the extremity of the last ventral segment.

One of the two examples found has an angular dark mark on the elytra as described above, while the other has a round mark.

11. **Sunius tenuis.** (Tab. XV. fig. 19.)

Angustior, ferrugineus, antennis, palpis pedibusque pallide flavis, elytris ad latera nigro maculatis, abdomine ante apicem nigro cingulato.

Long. 4 millim.

Hab. GUATEMALA, Paso Antonio 400 feet (*Champion*).

Very closely allied to *S. sanctus*, but a smaller insect, with much shorter antennæ. Each wing-case has a very large black mark on the side. The male has a slight emargination on the hind margin of the last ventral segment.

Ten examples were procured; they show no variation except in the size of the black mark on the elytra, and not much in this. All have the head a little infuscate; but this, I believe, is due to discoloration, the specimens being in very decayed condition.

12. **Sunius opaculus.**

Peropacus, ferrugineus, antennis, palpis pedibusque pallide flavis, elytris testaceis, prothoracis et elytrorum latera, abdominis segmentis duobus ultimis pectoreque nigricantibus.

Long. 5 millim.

Hab. GUATEMALA, El Jicaro (*Champion*).

Antennæ elongate and very slender. Head broad, very slightly wider than the elytra, fusco-ferruginous. Thorax as broad as the elytra, longer than wide, only moderately narrowed behind, very dull. Elytra elongate, longer than the thorax, dull, roughly asperate-punctate, flavescent, with the inflexed margin blackish. Hind body densely punctate, quite dull, the two terminal segments dark. Unique.

This insect has longer elytra than the immediate allies, besides being peculiar in its coloration.

13. **Sunius cinctiventris.**

Elongatus, linearis, testaceo-ferrugineus ; antennis, palpis pedibusque pallide flavis, abdomine segmento penultimo nigricante.
Long. 4½ millim.

Hab. MEXICO, Teapa (*Pilate*, *Sallé*); GUATEMALA, near the city, San Gerónimo, San Isidro (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ elongate. Head oblong, quite as broad as the elytra, distinctly pterygiate. Thorax elongate, slightly narrower than the elytra, a good deal longer than broad. Elytra longer than the thorax, asperate-punctate. Hind body densely punctate; penultimate segment black, with the hind margin red; terminal segment ferruginous.

This insect is very similar to the North-American *S. longiusculus*, but has longer antennæ, more distinctly pterygiate head, a longer thorax more slender behind, rather longer elytra, and only one segment at the extremity of the body dark.

The name I have used was proposed by Chevrolat for this species. Fauvel labelled it *S. attenuatus*, Er., and Sallé *S. lateralis*, Er.; but it is improbable that either is correct. From Guatemala we have received only one or two examples from each locality.

14. **Sunius testaceus.**

Sunius testaceus, Er. Gen. et Spec. Staph. p. 613[1].

Hab. GUATEMALA, near the city (*Champion*); NICARAGUA, Managua (*Sallé*).—SOUTH AMERICA, Colombia (*Moritz*)[1].

I have not seen any Colombian exponent of *S. testaceus*, and it cannot be considered certain that our exponents are really the Erichsonian species. We have received only one example from Nicaragua and two from Guatemala.

DIBELONETES.

Dibelonetes, Sahlberg, Act. Soc. Fenn. ii. 1847, p. 791.
Sunius (spurii), Erichson, Gen. et Spec. Staph. p. 645 (pars).
Sunides, Motschoulsky, Bull. Mosc. 1858, ii. p. 638, t. 1. f. *c*.

This genus was established on rather indefinite characters, and has since been merged in *Sunius*; it will, however, be a proper course to maintain it as distinct, and include in it such *Sunii* as have the labrum large in the middle, bispinose, *i. e.* furnished with two teeth or long spines, but without median excision; there is usually a very minute additional lateral denticle on each side. The teeth of the mandibles are constantly different in the two genera. In *Sunius* the labrum is not prolonged in the middle and is feebly bidenticulate.

The genus is, I believe, peculiar to the New World, and more specially characteristic of the tropical regions. In addition to the numerous species found within our limits it

should include *Sunius bidens*, *S. bispinus*, *S. spinifer*, *S. celatus*, *S. palpalis*, *S. confinis*, *S. peltatus*, and *S. catena*, Sharp; *S. bipunctatus*, *S. hybridus*, *S. stigma*, and *S. nævius*, Er.; and, I believe, also *Sunides boreaphilides*, Motsch., though this insect is placed in the Munich Catalogue in the genus *Lithocharis*. Although I am not at present able to accept *Sunides* as a genus distinct from *Dibelonetes*, yet it forms a distinct section.

§ 1. *Thorax small, subovate; right mandible bidentate* (Dibelonetes).

1. **Dibelonetes biplagiatus.** (Tab. XV. fig. 20.)

Dibelonetes biplagiatus, Sahl. Act. Soc. Fenn. ii. 1847, p. 792 [1]; Solsky, Hor. Soc. Ross. viii. p. 309 [2].

Hab. GUATEMALA, Zapote, Pantaleon, San Isidro, Las Mercedes, Volcan de Atitlan 2500 to 3500 feet, San Gerónimo (*Champion*).—SOUTH AMERICA, Peru [2], Brazil [1].

This species is placed in the Munich Catalogue as a synonym of *Sunius bipunctatus*, Er., a Colombian insect. There are, however, numerous closely allied species of this genus, and it is by no means clear to me that Erichson's description really refers to our insect; so I have followed Solsky's example, and used Sahlberg's name. The species is very variable in the dark markings, and I am not able to separate the Guatemalan examples by any good character from individuals captured at Rio Janeiro by Sahlberg and others.

2. **Dibelonetes fragilis.**

Elongatus, angustulus, testaceus; elytris nigro bipunctatis, abdomine ante apicem nigro variegato. Long. $5\frac{3}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ very pallid and very slender, the terminal joints slightly enlarged. Labrum in the middle with two short teeth. Head slender, much narrowed behind the eyes, reticulate-strigose. Thorax slender, much longer than broad, much narrowed towards the front, sculptured like the head. Elytra long and narrow, much longer than the thorax; the punctuation deep and distinct, and rather coarse; with an oval black spot behind the middle of each. Hind body slender and elongate, distinctly pubescent, very indistinctly punctured, the penultimate segments infuscate. Underside of the head with only very few distant punctures. Last ventral segment of male deeply and broadly excised.

Closely allied to *D. biplagiatus*, but of more slender form, with shorter teeth to the labrum, and narrower head and thorax. We have received four examples in very bad preservation; they show that the black marks are variable, as is also the case in *D. biplagiatus*.

§ 2. *Thorax more developed, always broader, usually longer, with the lateral angles not altogether obliterated; right mandible tridentate, the superior tooth only slightly prominent* (Sunides).

3. **Dibelonetes pallipes.**

Nigerrimus, antennis, palpis pedibusque pallide flavis; elytris minus opacis, crebre fortiter profundeque punctatis.
Long. 5 millim.

Hab. GUATEMALA, Cubilguitz in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*).

Antennæ long and slender, the terminal joints a little thicker. Labrum with two spines in the middle, and a minute sharp denticle on either side; right mandible tridentate, the left bidentate. Head suboblong, but a little constricted in front of the eyes, and a little narrowed behind these to the vertex, rather coarsely reticulate-strigose. Thorax elongate, considerably longer than broad, a little narrowed behind and more so in front, coarsely sculptured, towards the sides rugose and obsoletely impressed. Elytra considerably longer than the thorax, rather deeply and coarsely punctate. Hind body indistinctly punctate. Legs very pale yellow, rather stout. The male has the hind margin of the last ventral segment broadly but slightly emarginate.

Two examples from Guatemala, one from Nicaragua.

4. **Dibelonetes laticeps.** (Tab. XV. fig. 21.)

Nigerrimus, opacus, cinereo-pubescens, dense punctatus; antennis, palpis pedibusque pallide flavis, elytrorum apice omnino angustissime testaceo signato.
Long. 5 millim.

Hab. PANAMA, Bugaba, San Feliz (*Champion*).

Antennæ slender, rather long, a little thicker externally; penultimate joint only a little longer than broad. Head broad, slightly broader than the elytra, a little narrowed behind the convex eyes, the vertex truncate; densely reticulate-strigose. Thorax elongate, much longer than broad, gently narrowed behind, more abruptly so in front, densely sculptured. Elytra a little longer than the thorax, densely punctate, the outer apical angle of each with a small transverse pallid mark. Male with a very broad excision of the last ventral segment.

Readily distinguished from *D. pallipes*, and from an undescribed Brazilian species, by the much broader head. Five examples.

5. **Dibelonetes robustus.**

Latior, fortiter punctatus, fuscus; antennis, palpis, pedibus elytrorumque apice pallide testaceis.
Long. $4\frac{3}{4}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

We have only a single very immature example of this species, but it is so certainly distinct that I do not hesitate to give it a name; the colour may be darker (possibly black, as in *D. laticeps*) in the mature state. *D. robustus* is much broader than any of the allied insects; the head is broad, with the hind angles rounded, in shape very much like that of *Stilicus*, and densely reticulate. Thorax a little longer than broad, a little narrowed behind and greatly so in front, reticulate like the head. Elytra broad, rather longer than the thorax, coarsely and closely punctured, the hind margin irregularly of a flavescent colour, as in *D. posticalis*. Hind body densely, rather finely punctate.

6. **Dibelonetes posticalis.**

Latiusculus, niger; antennis, palpis, pedibus elytrorumque apice flavis, femorum posteriorum apice anguste fuscescente.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil, El Tumbador, Las Mercedes (*Champion*).

Antennæ only moderately long and slender, evidently thicker at the extremity; penultimate joint scarcely longer than broad. Thorax a little narrowed behind, more abruptly so in front, the lateral angles a little more distinct than in *D. laticeps* (so that the shape is like that of the species of *Stilicus*); rather coarsely rugose-punctate, the head being reticulate. Elytra broader and a little longer than the thorax, deeply and distinctly punctured; the hind margin rather broadly yellow, but the dark colour at the suture reaches the apex. Hind body densely and finely but distinctly punctate. Hind femora distinctly, the middle femora indistinctly, fuscescent at the extremity. Male with the hind margin of the terminal ventral segment broadly and deeply excised, that of the penultimate segment broadly but less deeply.

Though closely allied to *D. laticeps*, this insect is distinguished from it by numerous details. *Sunius hybridus*, Er., appears, from the description, to be also very near to *D. posticalis*.

7. **Dibelonetes panamensis.**

Niger, antennis, palpis, pedibus elytrorumque apice flavis, femorum apicibus fuscis.
Long. $4\frac{1}{4}$ millim.

Hab. PANAMA, David (*Champion*).

Antennæ only moderately long, thicker externally; penultimate joint transverse, the basal joint quite as long as the three following together. Head only moderate in width, the vertex completely rounded, the surface strigose. Thorax slender, much narrowed behind, and still more so in front. Elytra as long as the thorax, coarsely, deeply and distinctly punctured; hind margin of each with a rather large yellow spot. Hind body densely punctate. Hind and middle femora fuscescent externally.

A single fragmentary example of the female is all that has been found. The species has shorter antennæ and wing-cases than *D. posticalis*, and a narrower thorax.

8. **Dibelonetes pictipes.**

Nigricans, opacus, evidenter pubescens; antennis, palpis, pedibus elytrorumque apice flavis, femorum dimidio externo nigricante; abdominis segmentis duobus basalibus marginibus testaceis.
Long. 4½ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ elongate and slender, very little thicker externally. Labrum, mandibles, and palpi yellow. Head large and broad, much larger than the elytra, finely reticulate. Thorax small, rather longer than broad, much narrowed behind and in front. Elytra small, not longer though much broader than the thorax, rather convex, the pubescence conspicuous, densely and somewhat coarsely punctate. Hind body finely punctate. Legs long, the outer half of all the femora blackish.

One female example.

This species is closely allied to the Amazonian *Sunius palpalis*, but differs in numerous details.

9. **Dibelonetes tristigma.** (Tab. XV. fig. 22.)

Sat latus, testaceus, capite prothoraceque ferrugineis, elytris nigro triguttatis, abdomine segmento quinto nigro.
Long. 4 millim.

Hab. GUATEMALA, Las Mercedes, Cerro Zunil (*Champion*).

Antennæ rather short, slender, a little thickened externally, the penultimate joint about as long as broad. Labrum with two distinct fine short spines or denticles in the middle. Head suborbiculate, closely and finely reticulate. Thorax about as broad as long, a little narrowed behind, the greatest width near the front, thence considerably narrowed; densely reticulate, quite dull. Elytra a little longer than the thorax, coarsely punctate, with a small dark mark on the middle of each and a smaller common mark at the extremity of the suture. Hind body short, very finely punctate; the antepenultimate segment black. Eight examples.

10. **Dibelonetes occultus.**

Ferrugineus, antennis, palpis pedibusque pallide flavis, elytrorum apice dilutiore; labro longius bidenticulato.
Long. 4½ millim.

Hab. GUATEMALA, El Tumbador (*Champion*).

Antennæ long and slender, slightly thicker externally; mandibles very elongate; labrum prolonged in the middle and armed there with two slender elongate teeth. Head large, strigose in front, the sculpture effaced behind, where the surface is smooth and shining; vertex rounded. Thorax longer than broad, narrowed behind and more strongly so in front; the surface coarsely sculptured and rather deeply impressed on each side. Elytra slightly longer than the thorax, deeply and coarsely punctured,

rather shining, ferruginous, with the apex paler. Hind body rather broad, ferruginous, with the apex paler.

This species will be readily recognized by the sculpture being effaced on the hinder part of the head.

Only one example, in very bad preservation, has been obtained.

11. Dibelonetes latitans.

Latiusculus, ferrugineus; elytris abdomineque nigricantibus, apicibus (cum antennis), palpis pedibusque flavis.
Var. Corpore ferrugineo, elytris fascia mediali abdomineque segmento antepenultimo nigris.
Long. 4 millim.

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ slender, only slightly thicker externally; penultimate joint as long as broad. Labrum yellow, large, with two elongate denticles in the middle. Head elongate, finely reticulate, the vertex subtruncate. Thorax about as broad as long, distinctly narrowed behind, reticulate. Elytra longer and much broader than the thorax, the basal two thirds black, the apical third bright yellow, closely and distinctly punctate. Hind body fuscous-black, with the two apical segments yellow; broad. Legs pale yellow, quite unspotted.

I am not at all sure that the five examples I ascribe to this species are actually all conspecific. From the State of Panama we have three examples—one of the typical, two of the varietal form; in this latter the deficiency of colour may be due in part to immaturity. The example from Chontales is intermediate between the two Panama forms; and the exponent from Guatemala also exhibits some slight distinctions.

This species is closely allied to the Amazonian *Sunius peltatus*.

STILICOPSIS.

Stilicopsis, Sachse, Stett. ent. Zeit. 1852, p. 144.
Acanthoglossa, Kraatz, Wiegm. Arch. 1859, i. p. 144.

This genus, though approximated by certain forms of *Dibelonetes*, appears to be truly distinct. It has the labrum nearly unarmed in the middle, the mandibles short, and the thorax shorter and broader than it is in any species of *Dibelonetes*. In addition to the North-American species (for which it was instituted) and the species found in our region, it will include *S. pictus*, *S. modestus*, and *S. crassus*, Sharp. I am unable at present to point out any good character by which the Eastern genus *Acanthoglossa* can be distinguished from the New-World *Stilicopsis*, the difference in the shape of the labrum between the two being so slight that I cannot at present treat it as of generic

importance. As the species of the Eastern tropics are, however, very imperfectly known, it is probable that this union may only prove temporarily valid.

1. **Stilicopsis brevis.** (Tab. XV. fig. 23.)

Sunius brevis, Sharp, Trans. Ent. Soc. Lond. 1876, p. 295 [1].

Hab. GUATEMALA, Champerico, San Isidro (*Champion*).—SOUTH AMERICA, Amazons valley [1].

We have received only two examples of this species; the differences they exhibit when compared with the type from Ega are so slight that I cannot establish a species on them.

STAMNODERUS.

Caput ante oculos prolongatum. Collo angusto. Labrum magnum, medio longiore quasi lobum productum anterius subrotundatum formante. Mandibulæ tenues, modice elongatæ; sinistra uni-, dextra bidentata. Thorax elongatus, anterius attenuatus quasi tubuliformis. Femora anteriora plus minusve dilatata.

This curious genus is well distinguished by the form of the labrum and the peculiar structure of the thorax. The front tibiæ are slender and more or less curved. The tarsi have the basal joint elongate, the third joint very small, and the fourth produced as a membranous lobe under the terminal joint as in *Sunius*.

In addition to the species of our region the genus will include the Amazonian *Sunius insignis* and a nondescript insect from Louisiana; and I anticipate, from Erichson's description, that *Sunius labeo* will prove to be a *Stamnoderus*.

1. **Stamnoderus championi.** (Tab. XV. fig. 24.)

Fulvus, antennis, palpis pedibusque pallide flavis; capite prothoraceque subobsolete punctatis, hoc minus elongato et latitudine longitudinem superante.

Long. 5 millim.

Hab. GUATEMALA, Zapote, San Gerónimo (*Champion*).

Antennæ long and very slender. Head with the anterior part depressed and rather obsoletely punctate, the posterior portion convex, finely carinate along the middle, almost impunctate. Thorax very round at the sides, the anterior constricted portion short; finely carinate along the middle, rather obsoletely rugose-punctate. Elytra scarcely longer than the thorax, deeply and closely punctate. Hind body moderately broad, scarcely at all broader behind. The male has the terminal ventral segment broadly excised, and the basal joint of the hind tarsus much dilated.

2. **Stamnoderus sallæi.**

Fulvus, antennis, palpis pedibusque pallide flavis; prothorace densissime rugoso-punctato.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA (*Sallé*).

Vertex with a rough, not dense, sculpture of very feebly elevated granules, not carinate. Thorax very densely rugose-punctate, carinate along the middle. Elytra slightly longer than the thorax, densely, deeply, and coarsely punctate. Hind body densely and rather coarsely punctured.

We have received only one mutilated example of this species; it is readily distinguished from *S. championi* by the dense sculpture.

3. **Stamnoderus optatus.**

Testaceus, capite sublævigato; prothorace elongato, punctato, medio linea lævigata; elytris quam prothorax brevioribus.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Head almost entirely impunctate, the clypeus limited by a distinct angular suture. Thorax elongate, the narrow anterior portion elongate, the surface irregularly and rather coarsely punctate, with a well-marked smooth line along the middle, and an elongate linear lateral impression. Elytra narrow at the shoulders, coarsely but not densely punctate. Hind body a little constricted at the base; very little punctured, except on the basal segment, and at the base of each of the two following segments. One female example.

4. **Stamnoderus gracilis.**

Elongatus, testaceus; capite anterius rugoso; prothorace elongato, crebre punctato, medio linea lævigata minus discreta; elytris quam prothorax brevioribus.
Long. $5\frac{1}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Head rugose in front, the posterior part impunctate. Thorax elongate, greatly rounded at the sides, the anterior narrow portion elongate, coarsely and closely but rather indefinitely punctate, with a smooth line along the middle quite obsolete on the anterior part, the lateral impression rather broad and short. Elytra shorter than the thorax, coarsely punctate, narrow at the shoulders. Front tibiæ slender, curvate.

A single female.

5. **Stamnoderus godmani.** (Tab. XV. fig. 25.)

Elongatus, ferrugineus, antennis, palpis pedibusque flavis; abdomine subdilatato, nigricante, apice testaceo; dense punctatus, prothorace elongato, elytris longiore.
Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 6000 feet (*Champion*).

Antennæ long and slender, reaching nearly to the base of the thorax. Head elongate, densely rugose-punctate. Thorax elongate, greatly rounded at the sides, and with

the narrow anterior portion elongate; densely rugose-punctate, with a fine longitudinal carina, and a lateral depression near the base. Elytra densely punctate. Hind body coarsely and closely punctate, the punctuation towards the extremity obsolete. Front femora greatly dilated, with a slight angular projection armed with a porrect seta near the base; tibiæ slender, strongly curvate. The male has the terminal ventral segment broad, excised behind.

Four specimens of this curious insect were obtained by beating the thatch of a hut in the dense forest. Our figure represents a female.

Group **PÆDERINA.**

This group is characterized by the broad fourth joint of the middle and hind tarsi being deeply excavated above for the reception of the terminal joint, and more or less emarginate at the tip. The front coxal cavities are largely membranous above, in striking contrast to the 'Suniina'; the group, indeed, is much more nearly allied to the genera near *Lithocharis* than to *Sunius*, with which it is usually associated.

PÆDERUS.

Pæderus, Fam. III., Gravenhorst, Mon. p. 142.
Pæderus, Curtis, Brit. Ent. iii. t. 108; Erichson, Gen. et Spec. Col. p. 619.

This genus is one of the best defined of the Staphylinidæ, and comprises at present about one hundred or rather more species, and is widely distributed in each hemisphere. The species of the group having a bright-red hind body tipped with black are numerous, and found in all parts of the world, and are so similar to one another that they can only be certainly discriminated by examining the œdeagus, which presents frequently great differences in species appearing externally almost perfectly similar.

The brachypterous species are arboreal in their habits, according to Mr. Champion.

§ 1. *Brachypterous species, with the shoulders of the elytra but little prominent; hind body more or less dilated.*

1. **Pæderus alticola.** (Tab. XVI. fig. 1.)

Major, latiusculus, niger; elytris brevibus et angustis, cyaneo-viridibus; antennis, palpis, tarsis abdominisque segmentis duobus ultimis rufis.
Long. 17 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet, Volcan de Agua 8500 to 10,500 feet (*Champion*).

Antennæ slender, very long, unicolorous yellow, the penultimate joint quite twice as long as broad; palpi clear yellow; mandibles piceous. Head broad, sparingly and coarsely punctured. Thorax rather longer than broad, much narrowed behind, rather coarsely, sparingly punctate, with a broad space along the middle impunctate. Elytra

very narrow at the shoulders, shorter than the thorax, sparingly and finely punctate. Hind body broad, with the terminal two segments and the armature red. Legs black, the apices of the tibiæ picescent, the tarsi pale.

This is one of the most distinct species of the genus, and cannot be confounded with any other. Six examples were procured. Our figure represents a male.

2. **Pæderus luridiventris.** (Tab. XVI. fig. 2.)

Elongatus, angustulus, piceus; elytris viridi-piceis, brevissimis, capite nigro, abdomine luride rufo; antennis, palpis pedibusque testaceis, femoribus extrorsum late fuscis.
Long. 15 millim.

Hab. Panama, Bugaba, Volcan de Chiriqui up to 6000 feet (*Champion*).

Antennæ long and slender. Head broad, subtransverse, only sparingly punctate. Thorax much narrowed behind, quite sparingly punctate. Elytra small, very short and narrow, transversely impressed, very sparingly, obsoletely punctate, of a peculiar fusco-metallic colour.

Of this very distinct species a good series was obtained. We figure the male.

Found in the dense forest, by beating the lower branches of the trees (*Champion*).

3. **Pæderus testaceitarsis.**

Niger; antennis, palpis tarsisque testaceis, mandibulis flavo-piceis; capite parce punctato; elytris brevissimis, transversis.
Long. 14–15 millim.

Hab. Mexico, Istapan (*Sallé*).

Antennæ long and slender, immaculate. Head broad, quite sparingly and not very coarsely punctate. Thorax broad, scarcely so long as wide, but little narrowed behind, sparingly punctate, with a broad space along the middle impunctate. Elytra not quite so long as the thorax, broad and short, each deeply impressed, rather sparingly and not coarsely punctate. Hind body black, the terminal styles flavo-piceous. Tarsi yellow.

I have seen only one pair of this species. It was labelled *P. testaceitarsis*, Fauv., in Sallé's collection, and I have preserved the name. It is similar to *P. rufitarsis*, Solsky, but is larger and broader, with much less punctuation on the head, more elongate antennæ, &c.

4. **Pæderus salvini.**

Pæderus salvini, Sharp, Trans. Ent. Soc. Lond. 1876, p. 431[1].

Hab. Guatemala (*Sallé*), Aceytuno 5100 feet (*Salvin*[1]), near the city, San Gerónimo, Capetillo, Dueñas, Panajachel, Volcan de Atitlan (*Champion*); Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This interesting species is apparently rather common in Guatemala, and does not vary. From the State of Panama we have obtained only one female example.

5. **Pæderus rufitarsis.**

Pæderus rufitarsis, Solsky, Hor. Soc. ent. Ross. iv. p. 106 [1].

Hab. Mexico [1], Yolos (*Sallé*).

We have received three examples of this species. The antennæ are shorter and stouter than in any of the immediate allies. It has an unusually coarse punctuation on the head, and in this respect resembles *P. salvini*. Solsky [1] gives the length as $9\frac{1}{2}$ millim., but in fully extended examples I find it to be 11 millim.

6. **Pæderus currax.**

Elongatus, gracilior, nitidus, niger; elytris cyaneis, antennis palpisque flavis, tarsis testaceis, mandibulis flavo-piceis.
Long. 11–12 millim.

Hab. Mexico, Playa Vicente, Jalapa (*Höge*).

Antennæ long and slender. Head only moderately broad, rather sparingly punctate. Thorax not quite so broad as long, a good deal narrowed behind, sparingly punctate. Elytra slender, narrow at the shoulders, scarcely so long as the thorax, shining blue, coarsely and roughly punctured.

This insect is very closely allied to *P. salvini*, but differs in its pallid mandibles; it is narrower and more elongate than *P. rufitarsis*, with more elongate antennæ. We have received only three examples; the punctuation of the head is a little variable, but is less than in *P. rufitarsis* and *P. salvini*.

7. **Pæderus lætipes.** (Tab. XVI. fig. 3.)

Gracilis, niger, nitidus; elytris viridibus; palpis, antennis pedibusque testaceis, femoribus extrorsum antennarumque articulis penultimis fusco-nigris, mandibulis piceis.
Long. 12 millim.

Hab. Mexico (*Flohr*), Jalapa (*Höge*).

Antennæ moderately long, yellow, joints 5–10 more or less black. Head moderately broad, broader in the male than in the female, sparingly punctate. Thorax convex, longer than broad, much narrowed behind, only very sparingly punctured. Elytra shorter than the thorax, quite slender, not impressed, sparingly and not coarsely punctured. Apices of femora broadly black.

Although very similar to *P. currax*, this species is readily distinguished by the colour of the legs and of the antennæ. Höge procured a large series of *P. lætipes*. We figure the male.

8. **Pæderus velox.**

Elongatus, angustulus, niger, nitidus; elytris viridibus; antennis, palpis pedibusque testaceis, femoribus extrorsum fuscis.
Long. 13 millim.

Hab. Guatemala, Purula, Sinanja, Sabo (*Champion*).

Head broad, rather sparingly and coarsely punctate. Antennæ very slender, elongate, clear yellow, immaculate. Thorax longer than broad, much rounded at the front and hind angles, but not narrowed behind, very little punctured, very convex. Elytra very short and slender, deeply impressed, sparingly punctate. Femora broadly fuscescent externally.

Readily distinguished from *P. lætipes* by the longer and immaculate antennæ, the impressed wing-cases, and darker mandibles. *P. velox* greatly resembles *P. salvini*, but has a differently shaped thorax, and can be distinguished at a glance by the colour of the legs. The few examples I have seen were supposed to be duplicates of *P. salvini*.

9. **Pæderus erythroderus.**

Pæderus erythroderus, Er. Gen. et Spec. Staph. p. 663 [1].

Hab. Mexico [1], Orizaba (*Chevrolat*), Cordova (*Sallé*).

Of this species I have seen only the type from Chevrolat's collection and three examples obtained by M. Sallé. Chevrolat's example was obtained from Sallé.

10. **Pæderus filicornis.**

Elongatus, gracilior, nigerrimus; elytris cyaneis; antennis tenuioribus elongatis, testaceis, articulis 4°–10^{m} fuscis, tarsorum apicibus sordide testaceis.

Long. 12 millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ unusually slender, elongate. Mandibles black, piceous at the tip. Head rather narrow, narrower behind the eyes towards the vertex, quite sparingly punctate. Thorax suboblong, considerably longer than broad, but little narrowed behind, with but few, subobsolete punctures. Elytra short, not so long as the thorax, very narrow at the shoulders, sparingly punctate. Hind body broader than the anterior parts.

This is a much more slender insect than *P. currax*, and is readily distinguished from that species by the slender antennæ with infuscate middle joints, by the narrow head, dark palpi, and more oblong thorax. The species is known to me only by a unique female.

11. **Pæderus thoracicus.**

Pæderus thoracicus, Er. Gen. et Spec. Staph. p. 663 [1].

Hab. Mexico [1], Playa Vicente (*Höge*).

This species is very similar to *P. erythroderus*, but can be distinguished easily by the coarsely and deeply punctate wing-cases, which are slightly longer than in *P. erythroderus*; the scutellum and the greater part of the mesosternum also are black. Only a single immature example has come under my notice.

§ 2. *Elytra well developed, with well-marked shoulders; hind body more parallel-sided.*

12. **Pæderus signaticornis.** (Tab. XVI. fig. 4.)

Subparallelus, niger; antennis, palpis, mandibulis, prothorace pedibusque rufis, illis medio dilute fuscescentibus; femoribus extrorsum, tibiis tarsisque nigris; elytris læte cyaneis, crebre æqualiter punctatis, quam prothorax tertia parte longioribus; scutello mesosternoque rufis.

Long. 10 millim.

Hab. Mexico, Playa Vicente (*Höge*, *Sallé*), Jalapa (*Höge*); British Honduras, Rio Hondo, Rio Sarstoon (*Blancaneaux*); Guatemala, Zapote, La Tinta, San Juan, Cubilguitz, El Reposo (*Champion*); Nicaragua, Chontales (*Janson*), Granada, Managua (*Sallé*).

Antennæ elongate, yellow, joints 4–7 more or less deeply infuscate. Head rather narrow, the vertex narrow; very sparingly punctate, shining black. Thorax bright red, a good deal longer than broad, a little narrowed behind, very sparingly and feebly punctate. Elytra elongate and parallel, of a beautiful blue colour, deeply, coarsely, and rather closely punctate. Hind body entirely black, shining. Legs long, yellow; front tibiæ fuscescent; extremities of the hind femora, and the whole of the hind tibiæ and tarsi, black or blackish.

This elegant insect is apparently not abundant, though widely distributed in our region. The only variation it exhibits is in the intensity of the black colour of the legs and of the middle joints of the antennæ. Chevrolat in his collection proposed the name I have adopted for it; Fauvel, in the same collection, considered it to be *P. tricolor*, Er., but this can scarcely be the case. Our figure represents a male from the Rio Hondo.

13. **Pæderus lætus.** (Tab. XVI. fig. 5.)

Pæderus lætus, Er. Gen. et Spec. Staph. p. 660[1].

Hab. Mexico[1] Cordova (*Sallé*, *Höge*), Jalapa (*Höge*), Teapa (*Chevrolat*); British Honduras, Rio Hondo (*Blancaneaux*); Guatemala, Chinautla 4100 feet (*Salvin*), Guatemala city, San Gerónimo, Zapote, Cerro Zunil, El Tumbador, El Reposo, Lanquin, Tamahu, Sabo, Chiacam, Chacoj (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Costa Rica (*Van Patten*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

In Mexico this species varies but little, the form met with being that described by Erichson, with the intermediate and posterior legs largely infuscate. In the State of Panama Mr. Champion secured a large series, belonging to a different race, having the legs immaculate yellow, the elytra short and very coarsely punctured. From Guatemala we have received a fair series, and in this region the species is apparently much more variable. The legs are either yellow or infuscate to a variable extent, and the elytra in some examples are much longer. As these characters are variable, and as all the

forms agree in the structure of the œdeagus, I have no doubt they are all one species. We figure a female of the typical form from Jalapa.

14. **Pæderus yucateca.** (Tab. XVI. fig. 6.)

Robustus, niger; elytris quam prothorax vix longitudine, viridescentibus vel cyaneis, fortiter punctatis; mandibulis, prothorace, mesosterno abdominisque segmentis quatuor basalibus rufis; antennis, palpis pedibusque testaceis, antennis medio, femorum apicibus tibiarumque basibus fuscis; prothorace majore, basin versus evidenter angustato.

Long. 12–13 millim.

Var. Elytris majoribus, quam prothorax evidenter longioribus.

Pæderus tempestivus, Er. Gen. et Spec. Staph. p. 659, obs. ii. [1].

Pæderus rugepunctatus, Chevr., in coll.

Hab. Mexico (*Truqui*), Orizaba [1], Cordova (*Sallé*, *Höge*), Toxpam (*Sallé*), Jalapa (*Höge*), Yautepec (*Flohr*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, near the city, San Gerónimo, Panajachel, San Joaquin, Cubilguitz, Chiacam (*Champion*); Nicaragua (*Sallé*), Chontales (*Janson*); Costa Rica, Volcan de Irazu 7000 feet (*Rogers*).

Although Erichson himself regarded [1] an example of our *P. yucateca* as a large variety of his South-American *P. tempestivus*, I have no doubt he was in error in so doing. The Neotropical species of this group of *Pæderus* can only be satisfactorily discriminated by the assistance of an examination of the œdeagus, but this was unknown to Erichson; and as I fail to trace *P. yucateca* further to the south than Costa Rica, and as it is apparently replaced, even in the State of Panama, by an excessively similar but distinct species, I think it in the highest degree improbable that it extends to Brazil: thus I have little doubt that Erichson mixed more than one species under the name of *P. tempestivus*. I therefore treat our insect as undescribed, and adopt for it a name proposed by Fauvel, with which it is labelled in Chevrolat's and other collections.

P. yucateca is a variable species. The male usually has the head much broader than the female, but this is not constant. In all the Mexican examples the elytra are short, as mentioned in the above diagnosis, but in Guatemala they are usually considerably longer, though this also is variable. The southern examples of the female sex usually have the tooth terminating the last ventral plate longer, more slender, and spine-like, and with more recurved extremity. The lateral angles of this plate are always quite obtuse in *P. yucateca*. The œdeagus is of complex form, and a little asymmetric; its two lateral lobes are largely developed and of complex structure, the central lobe consisting of a long slender process something like a slightly crooked needle, and projecting considerably beyond the lateral lobes; it presents no marked difference even in the most dissimilar varieties in which I have examined it.

Our figure represents one of the largely developed males from Jalapa.

15. **Pæderus antiquus.**

Gracilis; capite, metasterno abdominisque apice nigris; mandibulis, prothorace, mesosterno abdominisque basi rufis; antennis, palpis pedibusque testaceis, illis medio, tibiis femorumque apicibus fuscescentibus; elytris cyaneis, prothoracis longitudine, parce punctatis.

Long. 9–10 millim.

Hab. Mexico, Minas Viejas (*Palmer*).

Antennæ very elongate. Head broad, the vertex on either side evidently broader than the neck. Thorax longer than broad, a good deal narrowed behind. Elytra coarsely and sparingly punctured. Joints 4–8 of the antennæ dilute fuscous; the apices of the middle and hind femora fuscous, and all the tibiæ fuscescent for the greater part of their length.

This species is very similar to the smaller examples of *P. yucateca*, but is rather more slender; the elytra are a little shorter, the œdeagus is totally different, and the hind margin of the last ventral segment is tridentate in the female.

We have received only one pair.

16. **Pæderus arduus.**

Alatus, niger; elytris quam prothorax paullo longioribus, cyaneis; mandibulis, prothorace, abdominis segmentis quatuor primis mesosternoque rufis; antennis, palpis pedibusque testaceis; antennis medio femorum apicibus tibiarumque basibus nigricantibus.

Long. 10 millim.

Hab. Panama (*Salvin*), Volcan de Chiriqui 4000 to 6000 feet, Bugaba (*Champion*).

This is extremely similar to *P. yucateca*, but is a considerably smaller insect, having the elytra of a beautiful blue colour, and the thorax rather smaller. The œdeagus in the two is so very different that no question can be entertained as to the distinctness of the two species.

The only male I have seen came into my possession with Mr. Janson's collection fifteen years ago, and was labelled "Panama (*Salvin*)." Mr. Champion's specimens are females, and, though broader, are apparently the same species; they have the lateral angles of the last ventral segment quite obtuse, as in *P. yucateca*, but the œdeagus is nearer to that of *P. antiquus*, though abundantly different therefrom. Three slender styles project from the basal lobe, and are of nearly equal length in *P. arduus*; whereas in *P. antiquus* the middle style is only half the length, and is moreover different in form. I do not think there will be any marked difference in the shape of the head of the sexes of *P. arduus*.

17. **Pæderus antoniensis.**

Gracilis, alatus; capite, metasterno abdominisque apice nigris; mandibulis, prothorace, mesosterno abdominisque basi rufis; palpis, antennis pedibusque testaceis, femorum posteriorum apicibus antennarumque articulis 4°–7^{m} fuscescentibus; elytris viridescentibus, quam prothorax longioribus, crebrius fortiter punctatis.

Long. 9 millim.

Hab. GUATEMALA, Paso Antonio 400 feet (*Champion*).

This insect is smaller and more slender than the smallest examples of *P. yucateca*, and has the front legs entirely yellow, the tips of the middle femora just perceptibly, those of the hind femora distinctly, infuscate; the tibiæ all clear yellow. The head is broad and short, finely punctate; the thorax is a little longer than broad, not much narrowed behind, shorter than in *P. yucateca*; the elytra are distinctly longer than the thorax, rather more closely and less coarsely punctured than in *P. yucateca*.

The œdeagus is similar to that of the species last mentioned. Unique.

18. **Pæderus cordovensis.**

Alatus, niger; elytris cyaneis, mandibulis, prothorace, mesosterno abdominisque segmentis quatuor basalibus rufis; antennis, palpis pedibusque testaceis, illis articulis 4°–8ᵐ, his ex parte majore, nigricantibus; capite latiusculo; elytris amplis, quam prothorax longioribus.

Long. 10–12 millim.

Hab. MEXICO, Cordova (*Höge*).

This species differs from *P. yucateca* by the elytra being more ample and rather more closely and finely punctured; by the legs being dark over a greater extent, the tibiæ and tarsi being nearly black or fuscescent, as well as the apices of the femora. We have received only two pairs of the species. The œdeagus is similar to that of *P. yucateca*, but with well-marked distinctions, the most striking of which is that, owing to the greater elongation of its lateral lobes, the slender median style is scarcely longer than they are. The female has the terminal ventral segment with a slender spiniform recurved tooth in the middle, the lateral angles being quite obtuse. I do not observe any marked difference in the size of the head between the two sexes. *P. cordovensis* is excessively like the Amazonian *P. sordidus*, but the œdeagus is quite different in the two. *P. femoralis*, Lec., is also allied to *P. cordovensis*, but has shorter elytra.

19. **Pæderus costaricensis.**

Alatus, rufus; elytris viridescentibus, quam prothorax paullo longioribus, fortiter punctatis, pectore nigricante, femoribus apice dilute fuscis.

Long. 11 millim.

Hab. COSTA RICA, Cache, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Var. Capite nigricante, tibiis posterioribus ad baseos fuscescentibus.

Hab. NICARAGUA, Chontales (*Janson*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Very closely allied to some of the varieties of *P. yucateca*, but distinguished by the pale antennæ and legs, and the absence of black colour on the hind body. We have received only two examples of the typical form, and two of the variety, and I feel by

no means sure that *P. costaricensis* will prove to be more than an extremely remarkable variation of *P. yucateca*.

20. Pæderus mexicanus.

Pæderus mexicanus, Er. Gen. et Spec. Staph. p. 657 [1].

Hab. Mexico (*Deppe* [1]), Presidio (*Forrer*), Cuernavaca (*Sallé*, *Chevrolat*), Puebla, Juquila (*Sallé*), Cordova (*Höge*).

Erichson's type of this species must have been a variety with unusually large elytra. The small series before me varies in respect of the length and breadth of these parts; usually when the wing-cases are short and broad, the punctuation is remarkably coarse. The œdeagus is quite different in its structure from that of any other species I have yet examined.

21. Pæderus columbinus. (Tab. XVI. fig. 7.)

Pæderus columbinus, Lap. Etud. ent. p. 123 [1].
Pæderus æquinoctialis, Er. Gen. et Spec. Staph. p. 657 [2].

Hab. Panama, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, Caldera, Tolé, San Miguel in the Pearl Islands (*Champion*).—South America, Colombia [1 2], Cayenne [2] (*Lacordaire*).

Erichson being in doubt whether Laporte de Castelnau's description really applied to this species, redescribed it under a fresh name. As there is no character at all to be found in Castelnau's insufficient description that is inapplicable to this insect, it will be well to adopt the prior name, as is done in the Munich Catalogue.

This insect is apparently common in the State of Panama, and differs in slight particulars only from any examples I have seen from Colombia or Cayenne; it is, I consider, conspecific with specimens found in the latter locality by Lacordaire, and named *P. æquinoctialis* by Erichson himself; there is, however, a slight difference in the œdeagus.

22. Pæderus apicalis. (Tab. XVI. fig. 8.)

Parvus, gracilis, testaceus, abdominis apice summo nigro.
Long. 5½ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala (*Sallé*, *Castelnau*), Paso Antonio, Champerico (*Champion*); Nicaragua, Managua (*Sallé*, *Chevrolat*).

Antennæ entirely yellow. Head narrow, with slender vertex. Thorax slender, longer than broad, sparingly punctate, with a broad space along the middle smooth. Elytra distinctly longer than the thorax, coarsely and rather closely punctate.

I have preserved for this distinct little insect the name given to it by Chevrolat, under which it is distributed in collections. Our figure represents an example

from Paso Antonio. *P. ustus*, Lec., from the Gila river, is, no doubt, an allied species.

23. **Pæderus pallidus.**

Parvus, gracilis, fulvo-testaceus, abdominis apice nigro, antennis articulis 5°–10ᵐ nigricantibus; elytris prothoracis longitudine.
Long. 6 millim.

Hab. GUATEMALA, Cubilguitz in Vera Paz (*Champion*).

This species is closely allied to *P. apicalis*, but is apparently a rather broader insect, with the antennæ in large part dark, the elytra shorter and rather more finely punctate.

We have received only two mutilated examples.

Subfam. *PINOPHILINÆ.*

TÆNODEMA.

Tænodema, Laporte, Etud. ent. p. 120; Erichson, Gen. et Spec. Staph. p. 679.
Gymnurus, Nordmann, Symb. p. 158.

This genus consists of about five-and-twenty species, and is confined to Tropical America, with the exception of a single species from Africa added to it by Dr. Gestro. When alive, the hind body is very extended, the membranes separating its segments being displayed and marked with white at their outer extremities; indeed, in some cases, the membrane may be entirely white; these membranes are also beautifully sculptured.

In our region, as elsewhere, these insects are only very rarely met with; and I have, indeed, only eight examples before me, representing at least six species.

The species are arboreal in their habits (*Champion*).

1. **Tænodema stigmaticum.** (Tab. XVI. fig. 9.)

Nigrum, nitidum; capite, prothorace elytrisque viridi-cyaneis; antennis, palpis pedibusque rufis, geniculis omnibus tarsisque quatuor posterioribus nigris, antennis extrorsum fuscis; prothorace elytrisque irregulariter minus dense punctatis.
Long. 23 millim.

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*).

Antennæ rather long and slender, obscure red; three or four of the penultimate joints infuscate at the tip, the terminal joint black; palpi infuscate, red. Head densely and coarsely punctate, with a small smooth space on the vertex. Thorax quite as long as broad, slightly narrowed in front, the hind angles largely rounded, irregularly punctured with a mixture of small and larger punctures, shining. Elytra very elongate, very shining, sparingly and feebly punctate. Hind body black, with the membranous borders of the segments ornamented with white; the basal segments with coarse punctuation on the basal part of each, the penultimate segments sparingly and finely punctate.

2. **Tænodema ornatum.** (Tab. XVI. fig. 10.)

Angustum, nigrum, nitidum; capite, prothorace elytrisque viridi-cyaneis, antennis palpisque flavis, illis extrorsum fuscescentibus; pedibus rufis, intermediorum tibiis tarsisque fusco-rufis, posteriorum tibiis tarsisque nigris; capite prothoraceque dense fortiterque punctatis, nitidis; elytris parce punctatis.
Long. 19 millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ not elongate, yellow, with the three terminal joints infuscate. Head coarsely, very densely punctate. Thorax a little longer than broad, very coarsely punctate. Elytra longer than the thorax; sparingly, irregularly, rather coarsely punctured, very shining. Hind body with the exposed dorsal membrane of the first and fourth segments entirely white, of the second and third black with white extremities.

This species has many points of difference from *T. stigmaticum*, to which, however, it is more nearly allied than to any of the others. Unique.

3. **Tænodema nigripes.**

Nigerrimum; antennarum basi, palpis tarsisque anterioribus fusco-testaceis, capite prothoraceque nigro-æneis, elytris æneis, parce punctatis; capite prothoraceque fortiter punctatis, hoc marginibus fere impunctatis.
Long. 16 millim.

Hab. Guatemala, Teleman (*Champion*).

Var. *mexicana*. Elytris minus obsolete punctatis.

Hab. Mexico, Cordova (*Sallé*).

Antennæ only moderately long. Head closely, very coarsely punctate, with a small transverse space on the vertex impunctate. Thorax quadrate, closely and coarsely punctate on the disc, but with the lateral and basal margins rather broadly impunctate. Elytra of a brighter metallic tint than the anterior parts, distinctly but not greatly longer than the thorax; sparingly and finely punctured, a little more closely so about the suture. Hind body intensely black, with the exposed membranes in part white.

If the Mexican example be indicative of a distinct species, it must be an extremely closely allied one; as we have received only one example of the type and one of the variety, I cannot speak very positively. The Amazonian *T. quadratum* is another allied species.

4. **Tænodema hæmorrhoidale.** (Tab. XVI. fig. 11.)

Nigerrimum, nitidum; antennarum basi, palpis tarsisque anterioribus fusco-rufis; capite, prothorace elytrisque viridi-æneis, abdomine apice rufo; capite prothoraceque fortiter punctatis, hoc marginibus fere impunctatis; elytris quam prothorax vix longioribus, parce punctatis.
Long. 12 millim.

Hab. Panama, Volcan de Chiriqui, Tolé (*Champion*).

This species agrees in most respects rather closely with *T. nigripes*, but is apparently a considerably smaller insect, with red extremity to the body. We have only one specimen from each locality. We figure the example from Tolé.

5. **Tænodema filiforme.**

Angustius, elongatum, nigrum; antennarum basi palpisque testaceis; capite, prothorace elytrisque minus læte viridescentibus, densissime fortissimeque punctatis, his punctatura apicem versus parcius ibidemque nitidis.
Long. 9 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ rather slender, very little thicker externally; the five basal joints red, the others dark. Head coarsely, very densely punctate. Thorax very slightly longer than broad, slightly narrowed behind, remarkable on account of the very dense coarse punctuation. Elytra elongate and slender, one and a half times as long as thorax, also very coarsely punctate, and with a distinct grey pubescence, the interstices slightly shining, the punctures on the apical portion much more distant and finer, and the surface there more shining. Hind body very slender, the basal segments coarsely punctate, but smooth towards the hind margins.

Unique. I know no species closely allied to this, except the following.

6. **Tænodema tibiale.** (Tab. XVI. fig. 12.)

Angustius, elongatum, nigrum; antennis, palpis tibiisque quatuor anterioribus testaceis, antennis extrorsum fuscescentibus; capite, prothorace elytrisque opacis, minus læte metallescentibus, densissime fortissimeque punctatis, his punctatura versus apicem parcius ibidemque nitidis.
Long. 10 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Although very closely allied to *T. filiforme*, this insect is readily distinguished by the colour of the tibiæ; it has also a more convex thorax, with the punctuation rather denser and coarser. The sculpture of the elytra is, however, considerably less dense, and their pubescence much less conspicuous.

One example.

PINOPHILUS.

Pinophilus, Gravenhorst, Micr. p. 201 (1801); Erichson, Gen. et Spec. Staph. p. 669.
Pityophilus, Brullé, Hist. Nat. Ins. iii. p. 75.

This genus has a wide distribution even after the subtraction from it of the forms I separate under *Lathropinus*, and occurs in the Old World as well as in the tropical and temperate regions of the New World. The species are usually rare, and the number extant in collections is probably only sixty or seventy. The genus *Aræocerus*, Nordm., is ascribed to *Pinophilus* as a synonym by Erichson and others; but this is a mistake, as *Aræocerus* is well distinguished by the edentate mandibles; it will probably be discovered in our region, as it occurs in South America, and the North-American *P. picipes* (which has been found near our borders) belongs to it. The *Pinophili* of our region form two very distinct groups, which will ultimately have generic im-

portance, and will also, no doubt, require separation from the Old World forms. Fauvel, indeed, intends separating an Asiatic form allied to my second group, under the name *Leucotrichus*.

The different species are found on the sandy banks of streams (*Champion*).

§ 1. *Thorax oblong* (Pinophilus verus).

1. Pinophilus parcus.

Pinophilus parcus, Lec. New Species N. Am. Col. p. 48 [1].

Hab. North America, Southern States [1], New Orleans (*coll. Sharp*).—Mexico (*coll. Sharp*).

The species of this group of *Pinophilus* are very difficult to separate, though the œdeagus indicates that they are valid. Hence I am not sure whether our insect be truly the species I have referred it to. In Chevrolat's collection specimens were labelled *P. flavipes*, Er., and if this were correct I should have adopted the latter name; *P. flavipes* is a Porto-Rican insect, and the description does not agree well with our species. I have only one Mexican exponent; but though I have retained no note as to the source whence I obtained it, I think the label probably correct.

In *P. parcus* the œdeagus is much broader than in any of the allied species of our region at present known to me, and the terminal ventral segment is much more prolonged.

2. Pinophilus albipes. (Tab. XVI. fig. 13.)

Pinophilus albipes, Er. Gen. et Spec. Staph. p. 675 [1].

Hab. Mexico (*Chevrolat* [1], *Flohr*), Cordova (*Sallé*), Jalapa (*Höge*).

Very close to *P. parcus*, but with rather shorter and more coarsely punctate elytra, the segments of the hind body not margined with red, and with strongly marked differences in the œdeagus. Erichson's type is now in my collection, and I am able to say that it was by some error that he described the sixth abdominal segment as being emarginate, as this is not the case. *P. albipes* is apparently not a common insect, and I anticipate from the short series before me that it will be found to vary a good deal in the sculpture of the anterior parts.

3. Pinophilus erythropterus.

Subopacus, niger; pedibus, palpis antennisque albido-flavis, his articulis extrorsum fuscescentibus; elytris quam prothorax longioribus, rufis; abdomine apice rufo, segmentis singulis rufo-marginatis.
Long. 15 millim.

Hab. Mexico (*Flohr*), Tuxtla (*Sallé*); Nicaragua, Chontales (*Janson*); Costa Rica, Cache (*Rogers*).

Head and thorax minutely punctulate, and with an additional coarse punctuation;

the former more or less shining; the latter dull, about as long as broad, a little narrowed behind. Elytra a little longer than the thorax, coarsely and densely punctate.

Externally this insect differs from *P. parcus* only by the red elytra; but the œdeagus shows well-marked distinctions, and differs but little from that of *P. albipes*. The species is apparently rare, as we have only one example from each source.

4. **Pinophilus sejunctus.**

Opacus, niger; palpis, antennis pedibusque pallide flavis, antennis articulis extrorsum fuscescentibus; elytris rufis, abdomine apicem versus rufescente; prothorace obsoletius minus crebre punctato.
Long. 13–15 millim.

Hab. GUATEMALA, Paso Antonio 400 feet (*Champion*).

This species is extremely similar to *P. erythropterus*, but is well distinguished by the external sexual characters of the male; in this sex the last ventral segment is sinuate on each side behind and more prolonged than in the female, the rather narrow apex being subtruncate; the ventral valve of the armature is flatter and terminates in a longer spine which is scarcely recurved. Independently of this the coarse punctuation of the thorax is more scanty and much more obsolete.

A series of sixteen examples exhibiting very little variation was obtained.

5. **Pinophilus parviceps.**

Angustulus, sat nitidus, nigro-piceus, capite dilutiore, elytris fusco-rufis; antennis, palpis pedibusque pallide flavis, abdomine apicem versus vage rufescente; prothorace nitido, transversim convexo, crebrius fortiterque punctato.
Long. 13 millim.

Hab. MEXICO, Ventanas 2000 feet (*Forrer*).

This is a rather more slender insect than *P. albipes*, and is well distinguished by the transversely more convex thorax, which is more shining, owing to the absence of the minute interstitial punctuation that exists in most of the allied species. The unique example is a male and has the ventral plate of the last segment formed almost as in *P. sejunctus*, that is sinuate at the sides behind and prolonged in the middle, the rather narrow apex being nearly truncate; the ventral valve of the armature is armed at the extremity only with a short angular process, not long enough to be called a spine.

6. **Pinophilus panamensis.**

Angustior, subcylindricus, niger; antennis, palpis pedibusque flavis; capite prothoraceque fortiter minus dense punctatis prætereaque minute punctulatis; elytris quam prothorax vix longioribus, dense fortiterque punctatis.
Long. 12 millim.

Hab. PANAMA, Tolé, San Feliz (*Champion*).

Extremely similar to *P. albipes*, but a smaller and rather more slender insect, with

shorter antennæ; the head and anterior parts of the thorax more shining; this latter is about as long as broad, scarcely at all narrowed behind, transversely convex, the coarse punctuation shallow and not at all dense, and the smooth space on either side near the front very distinct and polished. The œdeagus is shorter and not so slender as it is in *P. albipes*, and its lateral corneous wings do not appear as detached prominences.

7. Pinophilus guatemalenus.

Niger, opacus; palpis, pedibus antennisque pallide flavis, his articulis extrorsum fuscescentibus; capite prothoraceque punctatis prætereaque minute punctulatis; elytris prothoracis longitudine, densissime, fortiter, rugose punctatis.
Long. 15 millim.

Hab. GUATEMALA, Torola, Paraiso, San Gerónimo, Balheu, San Joaquin (*Champion*).

Externally this insect is excessively similar to *P. albipes*, but the sculpture is rather coarser and denser; the œdeagus, however, shows distinctions indicating that this may probably be a different species; the median style is shorter and broader, and instead of being gradually narrowed from the base to the apex, it is parallel-sided for three fourths of the length, and thence more abruptly narrowed; the short corneous lateral wing is shorter and broader than in *P. albipes*. There is also an external sexual distinction, inasmuch as the last ventral plate is much shorter than in *P. albipes*.

We have received only six examples of this species.

8. Pinophilus iners.

Angustulus, subopacus, niger; elytris rufis, densissime fortiter punctatis; antennis, palpis pedibusque flavis; prothorace sat crebre et fortiter punctato, subopaco.
Long. 12–13 millim.

Hab. PANAMA, Tolé, San Feliz (*Champion*).

Head picescent in front, the mandibles red. Thorax quite as long as broad, with rather close but shallow coarse punctures, and with a dense, interstitial, minute sculpture rendering the surface dull. Elytra no longer than the thorax, with very dense coarse punctuation, dark red. Hind body black, with one or two of the terminal segments a little rufescent behind.

The external distinctions of the sexes are not very conspicuous, but in the male the last ventral plate is more shining and impunctate in the middle behind, the hind margin of the plate is more truncate, and the ventral valve of the armature has the apical portion strongly laterally compressed and acuminate, but scarcely recurved.

This is another species closely allied to *P. albipes*. Only one pair was found at Tolé; a female specimen of a variety from San Feliz, of broader form and with feebly rufescent, rather larger elytra, may not be the same species.

9. **Pinophilus lineaticollis.**

Angustulus, piceus; antennis, palpis pedibusque flavis; elytris densissime fortiter punctatis, prothorace fere brevioribus; hoc crebrius fortiterque punctato, subopaco, medio linea angustula nitida.
Long. 13 millim.

Hab. Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

This may possibly prove to be a variety in an immature state of *P. iners*, but I think it more probably distinct, though the male characters externally appear almost identical. *P. lineaticollis*, however, is more uniform in colour, the elytra being but little more rufescent than the rest of the surface, and there is a distinct shining line along the middle of the thorax. Unique.

10. **Pinophilus fragilicornis.**

Niger, subdepressus; capite prothoraceque picescentibus, omnino opacis, hoc alutaceo et sat crebre subtiliterque punctato; antennis, palpis pedibusque pallide flavis; elytris dense fortiterque punctatis, sat nitidis.
Long. 11 millim.

Hab. Panama, Bugaba (*Champion*).

This is a very distinct species, distinguished by the regularly alutaceous, very dull thorax, which bears also numerous larger but yet fine punctures. The elytra are evidently longer than the thorax. The unique example found is a male, and has the last ventral plate prolonged behind, and with an angular notch at the extremity. I do not detect any spine at the apex of the ventral valve of the armature.

11. **Pinophilus opacicollis.**

Subdepressus, nigricans, opacus; antennis, palpis pedibusque flavis; prothorace peropaco, subtiliter punctato; elytris densissime punctatis.
Long. 15 millim.

Hab. Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

Similar in form to *P. albipes*, though more depressed, and with a shorter thorax, which is less narrowed behind; the thoracic sculpture, however, is very different, the surface being alutaceous so as to be quite dull, and the larger punctures, so conspicuous in *P. albipes*, are here small and indistinct. The elytra are obscurely rufescent at the base.

The only example discovered is a female.

§ 2. *Thorax globose, oblong, shining* (Pinophilus spurius).

12. **Pinophilus penetrans.** (Tab. XVI. fig. 14.)

Nitidus, niger, laxe pubescens; antennis, palpis pedibusque flavis, elytris sanguineis, abdominis apice late rufo; prothorace vix transverso, lateribus rotundatis, basin versus angustatis, fortiter punctato.
Long. 14 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Head and thorax very shining; the latter only slightly broader than long, coarsely punctate, the punctures absent from a small space near the base on the middle, and from another space on each side near the front margin. Elytra much longer than the thorax, shining, red, very coarsely punctate. Hind body black, with the terminal two segments red; rather sparingly but not finely punctate, and with a scanty flavescent pubescence. Male with the last ventral plate prolonged and feebly emarginate behind; ventral valve of the segment of the armature broader towards the apex, which is deflexed and with a deep emargination in the middle, the angle on each side slightly hamate.

A good series of this species was procured; the variation seems very slight indeed, except that in immature examples the thorax (or the head and thorax) is more or less piceous or even rufescent.

13. **Pinophilus reflexus.**

Gracilis, nitidus, niger, laxe pubescens; antennis, palpis pedibusque pallide flavis, elytris sanguineis; prothorace haud transverso, lateribus rotundatis, basin versus angustatis, fortiter punctato.
Long. 13 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Closely allied to *P. penetrans*, but considerably more slender, with the hind body entirely black, and with the ventral valve of the segment of the armature in the male abruptly bent upwards so as to close the orifice of the body behind. The punctuation of the surface is not quite so coarse, and the antennæ are more slender and shorter than they are in *P. penetrans*. The breast is red, but I am not sure that this is a constant character.

The small series of about ten examples exhibits no variation.

14. **Pinophilus basiventris.**

Gracilior, nitidus, rufus; capite, pronoto abdominisque basi nigris; antennis, palpis pedibusque pallide flavis; prothorace haud transverso, lateribus rotundatis, basin versus angustatis, fortiter punctato.
Long. 12 millim.

Hab. BRITISH HONDURAS, Rio Hondo (*Blancaneaux*); GUATEMALA, San Gerónimo, Zapote (*Champion*).

Though readily distinguished from *P. reflexus* by the colour of the hind body, which is lurid red with the two (or three) basal segments blackish, this species is in other respects externally similar thereto, though the thorax is apparently more slender; but the male characters of the two species are different: in *P. basiventris* the prolonged portion of the last ventral plate is rounded and narrowed towards the tip; the ventral valve of the segment of the armature is bent upwards at the tip, but does not close the body, as it is pierced by a large orifice, due to a deep emargination of the reflexed apex.

The basal segments of the hind body vary in colour according to the maturity of the individual; when quite immature all the segments are rufescent, even though the head and thorax have nearly attained the ordinary black pigmentation.

15. **Pinophilus agilis.** (Tab. XVI. fig. 16.)

Gracilior, nitidus, rufus, capite abdomineque nigris; antennis, palpis pedibusque pallide flavis; prothorace haud transverso, lateribus rotundatis, basin versus angustatis, fortiter punctato.
Long. 11 millim.

Hab. PANAMA, Caldera in Chiriqui 1200 feet (*Champion*).

This insect, though excessively similar to *P. basiventris* and *P. reflexus*, is readily distinguished by the bright red thorax, concolorous with the wing-cases; it agrees in this respect with the Amazonian *P. bicolor*, which species indeed it almost exactly resembles, but the male characters seem to indicate that the two are distinct. In *P. agilis* the ventral plate of the last segment is narrowed towards the apex in a curvilinear manner; the apex of the ventral valve of the segment of the armature is bent upwards at the extremity, but at the very apex it again becomes nearly longitudinal in its direction, and it exhibits behind a large orifice caused by an emargination that has an angular tooth at its base. In *P. bicolor* the sides of the last ventral plate are not curvilinearly narrowed, and the angular tooth of the ventral valve is represented by a very slender projection. Unique.

16. **Pinophilus validus.**

Robustior, nitidus, niger, laxe pubescens, elytris rufis; antennis, palpis pedibusque flavis, geniculis posterioribus late fuscis; prothorace leviter transverso, lateribus rotundatis, basin versus angustatis, fortiter irregulariter punctato, medio linea impunctata sat discreta.
Long. 15 millim.

Hab. MEXICO, Jalapa (*Flohr*), Cordova (*Sallé*); GUATEMALA, Cerro Zunil 4000 to 5000 feet, El Tumbador, Senahu (*Champion*); NICARAGUA, Chontales (*Belt*).

Very similar to *P. penetrans*, but more robust. The thorax is distinctly broader than long, the punctuation is more crowded along the middle on either side of the rather irregular and indistinct median space; the elytra are a little longer than the thorax, very coarsely punctate, slightly fuscescent at the extreme base. In the male the ventral plate of the last segment is strongly sinuate at the sides, moderately broad and scarcely emarginate at the apex; the ventral valve of the segment of the armature is of peculiar form, flat at the base, a little beyond which it is directed slightly upwards, forming a very obtuse angle; the apex of the valve is prolonged, bent downwards, and divided by a very narrow deep incision into two almost contiguous lobes.

We have received four examples from Guatemala, and the description is made from these specimens; from Nicaragua we have only one female, and from Mexico only two specimens of the same sex; there is a little doubt therefore whether these last-named

female exponents are truly conspecific, as the species in this group can scarcely be satisfactorily determined without a knowledge of the male characters.

17. **Pinophilus cribricollis.**

Nitidus, niger, laxe pubescens, elytris rufis; antennis, palpis pedibusque flavis, geniculis posterioribus fuscis; prothorace vix transverso, lateribus rotundatis, basin versus angustatis, crebrius fortiter punctato, absque linea impunctata.
Long. 13 millim.

Hab. GUATEMALA, Senahu in Vera Paz (*Champion*).

The thorax in this species is only about as broad as long; it is coarsely punctured, and there is no smooth space along the middle, or rather there are along the middle two very closely approximated irregular series of slightly larger punctures, scarcely distinguishable from the other punctures and so close together as to leave no distinct space between them. In other respects *P. cribricollis* is very similar to *P. validus*, but the male characters are different: the last ventral plate is not greatly produced in the middle, and has a rather broad slightly emarginate hind margin; the ventral valve of the segment of the armature is very peculiar in form, *e. g.* it is large, and the sides are raised, the apical portion being gently flexed upwards, the flexed portion forming two lobes separated by a deep and extremely narrow excision, and the apices of these lobes are a little deflexed.

We have received two male examples, one of them immature.

18. **Pinophilus parvicornis.**

Niger, nitidus, laxe pubescens; antennis, palpis pedibusque pallide flavis, illis brevibus.
Long. 12 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet, Bugaba (*Champion*).

Antennæ slender, reaching only as far back as the hind margin of the thorax. Thorax about as long as broad, coarsely punctate, very shining, without smooth space on the middle, but with a round smooth spot on either side near the front angle, the hind angles much rounded. Elytra longer than the thorax, shining black, very coarsely and not closely punctate. Hind body slender, rather closely punctate. The male has the last ventral plate much prolonged, and its hind margin very slightly emarginate; the ventral valve of the armature is abruptly bent upwards at the extremity so as to close the aperture of the body.

This insect is more slender than *P. reflexus*, and readily distinguished from that species by the black elytra. Only one example was obtained in each locality.

19. **Pinophilus longicornis.** (Tab. XVI. fig. 15.)

Niger, nitidus, longius, laxe pubescens; antennis, palpis pedibusque pallide flavis, illis longioribus.
Long. 14 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet, Bugaba (*Champion*).

Antennæ slender, reaching much further back than the base of the thorax. Head with the punctuation on the vertex coarse and extensive, separated from the discoidal sculpture by a narrow curvate space. Thorax very nearly as long as broad, curved at the sides and narrowed behind, very coarsely punctate, with an irregular space along the middle impunctate. Elytra elongate, much longer than the thorax, sparingly and very coarsely punctate. Hind body sparingly punctate. Legs immaculate, pale yellow. In the male the last ventral segment is much prolonged and has an obtuse, but not truncate, extremity; the segment of the armature has the dorsal plate extended beneath so as to greatly overwrap the ventral valve.

This species is nearest to the Amazonian *P. laxus*, but is abundantly distinct. In the small series of examples before me the extent to which the ventral valve of the male is enwrapped by the dorsal plate is variable, and I suspect there will prove to be two species in the series; but the specimens are so decayed and fragile that they cannot be submitted to a sufficiently prolonged examination. I am not able to point with certainty to any other character likely to distinguish the two forms. The type is that in which the enwrapping of the ventral valve is so very complete that only its tip can be seen.

LATHROPINUS.

Mandibulæ dentatæ, dente oblique truncato. Labrum brevissimum, medio leviter emarginatum. Antennæ rectæ. Prothorax oblongus. Tarsi anteriores lati, subrotundati, intermedii et posteriores articulo quarto parvo. Tibiæ intermediæ extus spinosæ.

The insects for which I propose this new genus are apparently mimetic, resembling species of *Lathrobium* and *Ocypus* more than their congeners. Independently of this peculiar facies they may always be recognized by the spines on the outer side of the middle tibiæ, and by the eyes being placed at the sides of the head, greatly in front of the hind angles.

The species of our region and *P. tenuis*, *modestus*, and *mimus*, Sharp, are the typical forms of the genus and resemble *Lathrobia*; the larger forms of American *Pinophili* that resemble *Ocypus* must also at present be included in the genus, viz. *P. tenebrosus*, Er., *P. dux*, *rectus*, *æqualis*, and *ater* Sharp, and no doubt also *P. major*, Brullé, *P. fulvipes*, Er., and *P. subtilis*, Arrib. The genus *Arœocerus* resembles these larger *Lathropini* in its facies, and has the middle tibiæ imperfectly spinose externally, but is well distinguished from *Lathropinus* and all the other *Pinophili* by its edentate mandibles.

1. **Lathropinus parallelus.** (Tab. XVI. fig. 17.)

Elongatus, subdepressus, piceo-niger, nitidus; antennis, palpis pedibusque rufis.
Long. 12 millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ slender, extending rather further back than the base of the thorax. Head

oblong-quadrate, very shining and impunctate in front, the vertex rather finely punctate, the disc also punctate in a curvate manner, and this punctuation only imperfectly separated from the sculpture of the vertex. Thorax oblong, considerably longer than broad, straight at the sides; shining, with an impunctate space along the middle, along each side of this punctate on a longitudinal space extending all along the thorax, and outside of this more sparingly punctate, all the punctures rather fine. Elytra scarcely at all longer than the thorax, rather sparingly and moderately coarsely punctured. Hind body rather closely but obsoletely punctate, much less shining than the other parts, the hind margins of the segments obscurely reddish, the apex itself red. The unique example is apparently a female.

HETEROLEUCUS.

Corpus subcylindricum, crassum. Antennæ geniculatæ. Caput parvum, oculis marginem posteriorem attingentibus. Mandibulæ unidentatæ, dente acuto. Pedes breves; tibiæ inermes; tarsi anteriores rotundati, intermedii et posteriores articulo quarto parvo.

This genus is well distinguished by the strongly geniculate antennæ, and by the shape of the mandibular tooth, which is simply acuminate instead of being chisel-shaped at the extremity. The form and sculpture are characteristic and do not occur in any of the allied genera, though approximated by the Old World *Pinophilus brevicollis*, Er. The genus is peculiar to Tropical America, and will comprise *P. crassicollis*, Er., *P. abax* and *P. egens*, Sharp, in addition to the two found in our region.

1. **Heteroleucus marginatus.** (Tab. XVI. fig. 18.)

Parum elongatus, niger; capite prothoraceque nitidissimis, elytris rufis, crebrius fortiterque punctatis; antennis, palpis pedibusque albido-flavis; abdominis lateribus cinereo-pubescentibus, apice flavo-fusco maculato.
Long. 12 millim.

Hab. GUATEMALA, near the City, San Gerónimo, San Joaquin, Balheu (*Champion*).

Antennæ short, the basal joint equal in length to the four following joints together. Head small, very shining, with a curvate series of punctures commencing at each angle of the clypeus and extending far backwards transversely across it, and a few punctures near each hind angle. Thorax slightly transverse, nearly straight at the sides, very shining, black, with two widely separated series each consisting of five or six punctures along the middle, and with four or five punctures on each side. Elytra coarsely and densely punctate, longer than the thorax. Hind body densely punctate, dull, the pubescence along each side cinereous, the hind margin of the penultimate segment pallid yellow with a fuscous dorsal mark. Legs very pale yellow. Male with the middle of the last ventral plate prolonged and acuminate at the apex, with a very short rather abrupt sinuation on either side. Some of the individuals of this sex have a very long seta projecting from the interior of the body quite at the apex.

Found on the sandy banks of streams (*Champion*).

2. **Heteroleucus mexicanus.**

Parum elongatus, niger ; capite prothoraceque nitidissimis, elytris rufis, parce fortiterque punctatis ; antennis, palpis pedibusque albido-flavis ; abdominis lateribus cinereo-pubescentibus, apice rufo.
Long. 11 millim.

Hab. Mexico, Yautepec, Morelos (*Flohr*) ; Guatemala (*Sallé*).

Though very similar to *H. marginatus* this insect is well distinguished by the longer thorax, the length of this part being slightly greater than the width, and the more sparingly punctured elytra and hind body ; the extremity of the hind body is immaculate red. In the male the last ventral plate is a little prolonged in the middle, and has the extremity almost rounded and the sides a little sinuate.

ŒDODACTYLUS.

Œdodactylus, Fairmaire et Germain, Ann. Soc. Ent. Fr. 1861, p. 441 ; Fauvel, Bull. Soc. Linn. Normand. 2nd ser. i. p. 22.

This distinct genus comprises one (possibly two) Chilian and two Amazonian species.

1. **Œdodactylus fauveli.** (Tab. XVI. fig. 19.)

Piceus ; antennis, palpis pedibusque testaceis, his sordidis ; capite prothoraceque parce punctatis, nitidulis ; elytris abdomineque dense punctatis, subnitidis.
Long. 8 millim.

Hab. Mexico, Cordova (*Höge*), Morelos (*Flohr*).

Antennæ slender, each joint from the fourth to the tenth decreasing slightly in length, the first four or five joints differing but little from one another in length. Head small, rather sparingly and finely punctured. Thorax slightly longer than broad, considerably narrower than the elytra, distinctly narrowed behind, moderately closely and rather finely punctate. Elytra rather longer than the thorax, emarginate behind, deeply and closely punctate. Hind body cylindric, immarginate, coarsely punctate, distinctly pubescent. Male with a small angular excision on the hind margin of the last ventral plate.

This species is closely allied to the Chilian *Œ. fusco-brunneus*, but is rather smaller, has the head shorter, more truncate behind, and with smaller eyes, the punctuation of the head less distant, and that of the hind body not at all obsolete. The examples sent by Mr. Flohr have the legs more or less piceous, due no doubt to their being in very decayed condition.

I have named this interesting Mexican insect after the distinguished Coleopterist to whom we owe the larger part of our knowledge of Chilian Staphylinidæ, M. Albert Fauvel, of Caen.

PALAMINUS.

Palaminus, Erichson, Gen. et Spec. Staph. p. 681.

This genus consists of about fifty described species and is specially characteristic of the New World, its species being very numerous in South America, while there are nine or ten known from the United States of North America. It is also sparingly represented in the Indo-Malayan and Austro-Malayan regions and in Northern Australia.

It is very difficult to treat it satisfactorily, owing to the obscure external specific characters, and the fact that the species are scarcely ever represented by sufficient series of examples to allow the varied sexual characters to be properly studied. This is not, I believe, due so much to the actual rarity of these insects—for Mr. Champion informs me that they are frequently to be met with by beating foliage—as to the great difficulty of preserving specimens, owing to their fragile nature and the rapidity with which they decay if not mounted soon after capture. It is no doubt for this reason that we possess only a very insufficient series of examples, so that I have been obliged to leave a few obscure species uncharacterized. The only character I can at present detect to divide the genus at all satisfactorily is based on the structure of the antennæ. The species of the first group are as a rule of more slender build than those of the second.

§ 1. *Antennæ excessively slender; terminal joint scarcely perceptibly broader than that preceding it and much narrowed towards the base, which is therefore very slender.*

1. **Palaminus lacertinus.** (Tab. XVI. fig. 20.)

Angustus, elongatus, niger; antennis, palpis pedibusque pallide flavis, palporum articulo ultimo magno; prothorace elongato, basin versus angustato, elytris multo angustiore, irregulariter punctato; elytris fortiter punctatis, ad apicem fere lævigatis.

Long. 8 millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet, El Tumbador 2500 feet (*Champion*).

Antennæ slender, long. Head small, very coarsely punctured, bearing long pallid hairs, the eyes rather small. Thorax small, just as broad as the head, but not much more than half the width of the elytra, as long as broad, not curved at the sides, greatly narrowed behind, very coarsely and irregularly punctured, and bearing long pallid hairs. Elytra about twice as long as the thorax, very coarsely punctured and distinctly pubescent, the punctures more distant towards the hind margin, and quite absent at the margin itself. Hind body coarsely, squamosely sculptured. One example from each locality.

2. **Palaminus parviceps.**

Angustus, elongatus, niger; antennis (?), palpis pedibusque pallide flavis, palporum articulo ultimo majore;

capite prothoraceque angustis, hoc elongato et basin versus angustato, elytris multo angustiore, irregulariter punctato; elytris fortiter punctatis, ad apicem fere lævigatis.

Long. 6 millim.

Hab. MEXICO, Cordova (*Höge*).

Though closely allied to *P. lacertinus* this insect is no doubt distinct, and differs as follows: it is smaller, the head and thorax are still narrower, the terminal joint of the maxillary palpus is larger, the eyes touch the hind margin of the head, and the thorax is not so broad in front and therefore less strongly narrowed behind. The unique example has lost its antennæ.

3. **Palaminus longicollis.**

Angustus, elongatus, niger; antennis, palpis pedibusque pallide flavis, palporum articulo ultimo majore; capite mediocre, oculis magnis; prothorace elongato, basin versus angustato, elytris multo angustiore; his crebre punctatis, ad apicem fere lævigatis.

Long. $7\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Of this species also we have obtained only one example; though allied to the two preceding by the long slender thorax, it is undoubtedly distinct. Antennæ mutilated, but the third, fourth, and fifth joints are very long. Head moderately large, with convex eyes not attaining the hind margin; terminal joint of the maxillary palpus extremely large. Thorax rather longer than broad, much narrower than the elytra, strongly narrowed behind; its punctuation like that of the head, moderately coarse, not confluent. Elytra very elongate, rather closely punctate. Hind body unusually definitely sculptured; terminal styles very long, strongly sinuous. Legs slender.

4. **Palaminus validus.**

Elongatus, niger; antennis, palpis pedibusque pallide flavis, palporum articulo ultimo magno; capite sat lato; prothorace sat elongato, basin versus angustato, minus dense punctato; elytris fortiter punctatis, ad apicem fere lævigatis.

Long. $8\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species has the front tibiæ and tarsi considerably broader than in either of the species above described; the thorax is a little broader, its punctuation and that of the head less close and deep; the eyes are moderately large, and do not attain the hind margin. The elytra are about twice as long as the thorax. Two mutilated examples.

5. **Palaminus cognatus.**

Elongatus, niger; antennis, palpis pedibusque pallide flavis, palporum articulo ultimo magno; prothorace sat elongato, basin versus angustato, irregulariter subobsolete punctato; elytris fortiter punctatis, ad apicem fere lævigatis.

Long. 8 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet, San Feliz (*Champion*).

This species is closely allied to *P. validus*, but differs in having distinctly shorter elytra and a shorter and broader, more obsoletely punctured thorax; the terminal joint of the maxillary palpus is scarcely so large. The eyes are not large, and do not quite attain the hind margin. The thorax is evidently broader than long, and the rather few punctures on it are placed so as to leave two or three almost bare spaces. The punctuation of the elytra is close only at the base. Three mutilated examples.

6. **Palaminus crenatus.**

Angustulus, elongatus, niger; antennis, palpis pedibusque pallide flavis; prothorace angusto, basin versus angustato, parce punctato, utrinque impresso; elytris apicem versus latius lævigatis; abdominis segmentis ultimo et penultimo ad summam basin minute crenulatis.

Long. 7½ millim.

Hab. GUATEMALA, Cubilguitz (*Champion*).

Antennæ long and slender. Head broad, nearly as broad as the elytra, coarsely punctate, the eyes separated by a considerable space from the hind margin. Thorax not quite so long as broad, considerably narrower than the elytra, greatly narrowed behind, with a depression on each side of the middle (more distinct than in the preceding and following species), sparingly punctured, the major part of the punctures placed in the depressions. Elytra not twice as long as the thorax, rather sparingly punctate.

One female. The crenulate sculpture, extending as a band all round the base of each of the terminal two segments, does not appear to be present in any of the other black species here described.

7. **Palaminus insignis.**

Elongatus, angustus, niger; antennis (?), palpis, pedibus elytrorumque margine apicali, pallide flavis; prothorace angusto, basin versus fortiter angustato.

Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ with the six basal joints slender and elongate (the rest broken off). Head slightly broader than the thorax, coarsely punctate. Thorax slender, very much narrower than the elytra, about as long as broad, greatly narrowed behind, coarsely punctate, indistinctly bi-impressed. Elytra not quite twice as long as the thorax, coarsely punctate, the punctuation dense at the base, absent from the hind margin, which is very conspicuously flavescent. Legs very slender. Terminal styles very long.

This insect somewhat resembles *P. apicipennis* on account of its coloration, but is very distinct by reason of the slender thorax and elongate terminal styles; and though the antennæ are mutilated, I have no doubt from the general structure that the species belongs to this group. Unique.

8. **Palaminus gracilipes.**

Elongatus, angustus, ferrugineus; antennis, palpis pedibusque pallide flavis; elytris testaceis, sutura angustissime fuscescente; prothorace gracile, crebre fortiterque punctato.
Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet, Peña Blanca 4000 to 5000 feet (*Champion*).

Antennæ long, very slender. Head considerably narrower than the elytra, coarsely punctate, the eyes not quite attaining the hind margin. Thorax about as long as broad, strongly narrowed behind, coarsely not densely punctured, with a smooth space on the middle and a slight depression on each side of it. Elytra not quite twice as long as the thorax, coarsely punctate, the hind margin impunctate. Legs very slender. Terminal styles very long. The unique typical example has the last ventral segment quite simple and is probably a female; the exponent from Peña Blanca is extremely mutilated, and I am not at all sure that it is really conspecific.

9. **Palaminus fusciventris.**

Gracilis, testaceo-ferrugineus, abdomine fusco-ferrugineo; antennis, palpis pedibusque pallide flavis; prothorace gracile, fortiter punctato; elytris minus elongatis.
Long. $4\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ rather slender, moderately long; terminal joint scarcely at all thicker and but little longer than the penultimate joint. Head short and broad, quite as broad as the thorax, the eyes attaining the vertex. Thorax rather broader than long, much narrower than the elytra and greatly narrowed behind, irregularly, moderately closely punctate, and impressed on each side of the middle. Elytra very coarsely punctate, rather convex, scarcely one and a half times the length of the thorax.

This obscure insect much resembles *P. deformis* and its allies, but from the structure of the antennæ must be placed in this group. It is unique.

§ 2. *Terminal joint of the antennæ with less slender base, and always distinctly broader than the preceding joint.*

10. **Palaminus sordidus.**

Elongatus, angustulus, ferrugineus; antennis, palpis pedibusque pallide flavis; elytris testaceis, sutura basin versus, abdomineque ante apicem fuscescentibus.
Long. 5 millim.

Hab. MEXICO, Cordova (*Höge*).

Antennæ slender, the terminal joint a little stouter than that preceding it, but only slightly longer; last joint of the maxillary palpus only moderately large. Head a good deal narrower than the elytra, the eyes not attaining the vertex. Thorax evidently broader than long, but a good deal narrower than the elytra, curved at the sides and

strongly narrowed behind, moderately closely and coarsely punctate. Elytra elongate, moderately closely and coarsely punctate; along the sutural region vaguely infuscate, more distinctly so about the scutellum. Terminal styles elongate. Legs moderately long and slender. Unique.

The terminal joint of the antennæ in this species is to a certain extent intermediate in form between the two groups, as it is rather more slender at the base than in the other species of this group, and so more disconnected from the preceding joint.

11. **Palaminus mexicanus.**

Minor, gracilis, dense punctatus, niger; antennis, palpis pedibusque pallide flavis; prothorace elongato, dense fere regulariter punctato; elytris dense punctatis.
Long. 5 millim.

Hab. Mexico (*Flohr*), Cordova (*Höge*).

A very distinct little *Palaminus*, with short and (for this genus) unusually stout antennæ, more than usually dense punctuation, very large apical joint of the palpi, and short terminal styles to the hind body. The thorax is a little narrower than the elytra, not so long as broad, rather strongly narrowed behind, closely and almost regularly punctured. Elytra densely punctured, the punctures not so scanty near the hind margin as usual. Membranes separating the segments of the hind body pallid. Two examples; the one sent by Mr. Flohr, though in very bad condition, is no doubt conspecific with the type.

12. **Palaminus concolor.** (Tab. XVI. fig. 21.)

Latior, niger, crebrius punctatus; antennis, palpis pedibusque pallide flavis; prothorace brevi, transverso, basin versus angustato.
Long. 7 millim.

Hab. Guatemala, El Tumbador 2500 feet (*Champion*); Panama, Bugaba (*Champion*).

Antennæ short, and for this genus rather stout. Head broad and short, nearly as broad as the elytra, closely and coarsely punctured. Thorax much shorter than broad, a little narrower than the elytra, coarsely and closely punctured, with a slight longitudinal elevation or plica in the middle before the base. Elytra closely and regularly punctured. Legs rather short, the front tibiæ stout. The male has the last ventral plate prolonged and strongly asymmetrical, it being narrowed towards the apex in an obliquely sinuous manner, the sinuosity on the right-hand side being much shorter than that on the left; the apex is very narrow, but not acuminate. One example from each locality: we figure the specimen from Bugaba; it is a female, and considerably larger than the Guatemalan exponent.

13. **Palaminus rubripennis.** (Tab. XVI. fig. 22.)

Niger, elytris rufis, antennis, palpis pedibusque testaceis; dense fortiterque punctatus; prothorace brevi.
Long. 7 millim.

Hab. Panama, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ only moderately slender, thicker externally, the terminal joint more than twice as long as the tenth. Head broad, not much narrower than the elytra, densely and coarsely punctate; eyes large, attaining the hind margin. Thorax much broader than long, closely and coarsely punctured, without any depressions. Elytra elongate, twice as long as the thorax, closely and coarsely punctate, the apical part not free from punctures. The terminal plate in the male is much prolonged in the middle and is asymmetrical; it is sinuate on each side, the sinuosity of the right side being much shorter and more abrupt than that of the left.

Three examples.

14. **Palaminus palmatus.**

Robustus, piceo-testaceus; antennis, palpis pedibusque testaceis, crebrius fortiterque punctatus; prothorace brevi.

Long. $6\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ rather short, thicker externally, the terminal joint longer and a good deal thicker than the tenth. Head rather narrower than the elytra, coarsely punctate; eyes rather small, not attaining the hind margin. Thorax a little narrower than the elytra, considerably broader than long, a little narrowed behind, coarsely and rather closely punctate. Elytra coarsely punctate, not quite twice as long as the thorax. Front tibiæ very thick. Terminal styles elongate. The unique example is no doubt a female, as it possesses a slight broad emargination of the last ventral plate. This example is much decayed, and it is probable that when fresh the wing-cases and the anterior parts of the body may be of a brighter ferruginous colour than they are at present.

15. **Palaminus apicipennis.** (Tab. XVI. fig. 23.)

Fuscus; antennis, palpis, pedibus elytrorumque margine apicali flavis; dense punctatus, longius pilosus.

Long. 5 millim.

Hab. Guatemala, near the city, Aceytuno, San Gerónimo, Capetillo (*Champion*).

Antennæ rather short and stout, thicker externally, the terminal joint being considerably less slender than the penultimate one. Head very coarsely punctate; eyes rather small, not quite attaining the hind margin. Thorax rather small, evidently narrower than the elytra, broader than long, curved at the sides and narrowed behind, densely and coarsely punctured, with a small smooth space on the middle. Elytra closely punctate, the hind margin yellow, the punctuation scarcely present on this flavescent part. Legs short. Terminal styles short, rather widely separated. Sexual distinctions apparently very slight.

Several specimens, obtained by beating trees.

16. **Palaminus parvulus.**

Parvus, testaceus, abdomine ferrugineo; capite prothoraceque densius fortiterque punctatis; elytris elongatis, dense subtilius punctatis.
Long. 4 millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ short, the terminal joint stouter but scarcely longer than the one preceding it. Head small, rather narrower than the thorax; eyes attaining the hind margin. Thorax much narrower than the elytra, rather broader than long, very coarsely and densely punctured. Elytra pallid yellow, twice as long as the thorax, densely and rather finely punctate. Terminal styles moderately long. In the male the last ventral plate is much produced, and is broad, forming a transparent shield to the basal portion of the armature.

This obscure little insect resembles *P. testaceus*, Er., Lec., but the male characters are quite different.

Two examples.

17. **Palaminus deformis.** (Tab. XVI. fig. 24.)

Parvus, testaceus, abdomine ferrugineo; capite prothoraceque densius fortiterque punctatis, hoc transverso; elytris dense punctatis.
Long. 4 millim.

Hab. Mexico, Teapa (*Chrevrolat*), Jalapa (*Höge*); Guatemala, near the city, Aceytuno, Capetillo, Zapote (*Champion*).

This insect is very similar to *P. parvulus*, but the thorax is strongly transverse, and the elytra are shorter and more coarsely punctate. The male characters are peculiar: the last ventral segment is much produced and very unsymmetrical in form; on the left side there is a spine separated by a deep incision from the more elongate main lobe; this latter has a broad extremity, which is sinuate-emarginate in an unsymmetrical manner. The female has the last ventral plate simple.

We have a small series of this species; the two Mexican examples are females in a bad state of preservation, and are far from agreeing with the type or *inter se*, so that I am not at all sure that they really represent the same species.

18. **Palaminus chiriquensis.**

Parvus, gracilis, testaceus, abdomine ferrugineo; capite prothoraceque dense fortiterque punctatis, hoc transverso; elytris crebre fortiterque punctatis.
Long. 4 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This species bears a very great similarity to *P. deformis*, but is rather more slender and a little less densely punctate, and the males of the two have strongly marked distinctions. In this sex of *P. chiriquensis* the terminal ventral plate is produced backwards and

abruptly sinuate on each side so as to form a short broad median lobe, which is asymmetrical, having been, as it were, forced a little towards the left, the right angle being quite rounded, while the left is acute. The œdeagus presents strongly marked distinctions in the two species, though, owing to the extremely contorted form, these are not easily described. Unique.

19. **Palaminus filum.**

Parvus, gracilior, testaceus, abdomine ferrugineo; dense punctatus; prothorace minus transverso, basin versus angustato.
Long. 4 millim.

Hab. British Honduras, Belize (*Blancaneaux*); Nicaragua, Chontales (*Janson*).

Antennæ only slightly thicker at the extremity; terminal joint quite short. Head short; eyes attaining the vertex. Thorax a little narrower than the elytra, a little broader than long, very distinctly narrowed behind, coarsely and densely punctate. Elytra elongate, slender, not quite twice as long as the thorax, densely and rather finely punctate.

This species, on account of the less transverse thorax and more finely punctate elytra, comes near *P. parvulus*; but *P. filum* has less ample wing-cases and different sexual characters. The two examples of *P. filum* have an angular emargination in the middle of the hind margin of the last ventral plate; and although in this genus such a character is usually characteristic of the female sex, yet I have little doubt these two examples are males, as the emargination is accompanied by an evident prolongation of the plate and on each side of it there is a small prominent angle. Moreover, a third example, which, though only $3\frac{1}{3}$ millim. in length, is, I have no doubt, the same species, has the terminal ventral plate simple.

20. **Palaminus debilis.**

Parvus, testaceus; abdomine ferrugineo, elytris circa suturam leviter infuscatis; fortiter punctatus; prothorace transverso.
Long. 4 millim.

Hab. Nicaragua, Chontales (*Janson*).

Terminal joint of the antennæ elongate (in the male), about three times as long as the tenth joint. Thorax rather strongly transverse, coarsely, rather closely punctate. Elytra nearly twice as long as the thorax, coarsely, rather closely punctate. In the male the terminal ventral plate is much produced in the middle, and so strongly twisted to the left as to be sub-uncate; on each side there is a minute tooth.

Very similar to *P. deformis*; but, in addition to the male characters, it is probable that the species may be distinguished by the darker colour of the middle of the wing-cases. Unique.

21. **Palaminus vittatus.** (Tab. XVI. fig. 25.)

Angustus, elongatus, nigro-fuscus; antennis, palpis pedibusque pallide flavis; elytris testaceo vittatis.
Long. 5 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ rather short and stout; terminal joint but little longer than that preceding it. Head very coarsely punctate. Thorax transverse, but not strongly so, evidently narrowed behind, closely and very coarsely punctate. Elytra moderately long, one and a half times as long as the thorax, rather coarsely and closely punctate, with a pallid vitta near each outer margin, extending the whole length, and with the hind margin also pale. The two examples before me do not exhibit any conspicuous sexual mark.

22. **Palaminus humeralis.**

Fuscus; antennis, palpis pedibusque pallide flavis; elytris utrinque vitta sat elongata testacea.
Long. 4½ millim.

Hab. MEXICO, Teapa (*coll. Chevrolat*).

Antennæ rather short and moderately stout, very pallid; terminal joint evidently shorter and longer than that preceding it. Thorax strongly transverse, a little narrower than the elytra, rather closely punctate, with a faint depression on each side near the middle. Elytra only moderately long, rather closely punctate, with a humeral mark not reaching the apex; the hind margin very narrowly pale.

One example.

23. **Palaminus diffinis.**

Parvus, angustior, elongatus, testaceus, abdomine ferrugineo; antennis, palpis pedibusque pallide flavis; capite prothoraceque obsolete punctatis.
Long. 3½ millim.

Hab. NICARAGUA, Chontales (*Janson*).

This obscure little insect is very distinct on account of its more obsolete punctuation. It is of very slender form, and, with the exception of *P. fragilis*, the smallest species yet described. The antennæ are short, with the terminal joint slightly thicker and longer than that preceding it. The eyes do not quite attain the vertex. Thorax transversely subquadrate, but little narrowed behind, dull, only obsoletely punctate, with a faint broad depression on each side of the middle. Elytra very slender, elongate, nearly twice as long as the thorax, rather closely and somewhat finely punctate. Unique.

Subfam. *EVÆSTHETINÆ.*

These insects, though allied to the "Pæderinæ" and "Steninæ," must receive the rank of subfamily, as the structure of the front coxæ is totally different from that of the "Pæderinæ," and the insertion of the antennæ and the structure of the trophi will

not permit their association with the "Steninæ." The subfamily will include *Stenæsthetus* and *Ctenomastax*, besides its typical genus, and some others that have already been associated with *Evæsthetus*; and I have little doubt that *Turellus* (Sharp, Tr. Ent. Soc. Lond. 1876, p. 423), for which I have not previously ventured to suggest a position, also belongs to it.

EDAPHUS.

Edaphus, Leconte, Class. Col. N. Amer. 1st edit. p. 67 (1861); Leconte & Horn, ibid. 2nd edit. p. 98 (1883).
Tetratarsus, Schaufuss, Nunq. Ot. ii. p. 460.

This genus consists of only five or six species, but has already been detected in North America, Europe, and Eastern Asia. These insects are remarkable from their great resemblance to *Euplectus* in the Pselaphidæ.

1. **Edaphus euplectoides.** (Tab. XVII. fig. 1.)

Dilute piceus, pedibus dilutioribus, nitidus, fere glaber, impunctatus; capite inter oculos depresso; prothorace basi profunde impresso.
Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Of short convex form, with small head. Antennæ with the two terminal joints abruptly larger than the others. Head deeply depressed, and the surface thickened and somewhat raised in front of the depression. Thorax broader than long, constricted at the base; behind with four foveæ forming an almost continuous transverse depression, the pair on each side being only indistinctly separated, and the two pairs divided in the middle by a plica. Elytra longer than the thorax, with fine sutural striæ, impunctate, polished. Hind body very short.

The two examples obtained exhibit no sexual characters.

Subfam. *STENINÆ.*

Rey's recent definition of "Stenides" is satisfactory, and as a subfamily these insects are well distinguished by the quite exposed insertion of the antennæ, and the broad separation of the hind coxæ by a bilobed process of the metasternum, in conjunction with the small anterior coxæ inserted at the posterior part of the prosternum. The subfamily will comprise only *Dianous* and *Stenus*, for *Megalops*, which has been placed in it by some authorities, differs in some important structural particulars.

STENUS.

Stenus, Latreille, Préc. des Car. Gén. des Ins. p. 77 (1796); Erichson, Gen. et Spec. Staph. p. 689.
Hemistenus, Motschoulsky, Bull. Mosc. 1860, pt. 2, p. 557.
Areus, Casey, Rev. Sten. N. Am. p. 150.

This genus is one of very large extent, about 500 species being known, and as it is

undoubtedly well represented in tropical as well as in temperate countries, the lowest estimate that I can make of the number of its species is 1500; it is found in nearly all parts of the world, except oceanic islands and New Zealand. It was proposed by Motschoulsky, and more recently by Casey, to separate the genus into two, leaving the name to those species having filiform tarsi; this course, however, is premature, and the genus when divided will probably fall into many more than two. Rey has very recently proposed six subgeneric names for the European species, but his divisions are not happily selected; and as Erichson's main sections of the genus, depending on the lobation or simplicity of the tarsi and the margined or immarginate hind body, are quite satisfactory, I make use of them, adding a few subordinate groups where necessary to facilitate the determination of our species. These, as will be seen, are fairly numerous, though falling far short of the corresponding number of species in North America, from which region Casey has recently described no less than 170. The species of our country seem, as a rule, to be less gregarious in their habits than those of more northern regions. I have no doubt that further researches will more than double the number of Central-American species. The *Steni* of our region show apparently but little relationship with those of North America, and it is probable that, except in the northern parts of Mexico, very few species indeed are common to the two regions. Our species are much more similar to those of the Amazon valley and other parts of South America, but as yet very few appear to be common to it and to the South-American continent. I here register 66 species as found in our region.

I. *Tarsi articulo quarto simplice.*

A. *Abdomen marginatum.*

1. **Stenus renifer.** (Tab. XVII. fig. 2.)

Stenus renifer, Lec. New Sp. Col. p. 50[1]; Casey, N. Am. Stenini, p. 16[2].

Hab. North America, Fort Yuma[1], Texas[2].—Mexico (*Flohr*).

2. **Stenus sallæi.**

Elongatus, angustus, subopacus, niger; abdomine minus opaco, brevissime griseo-pubescente; palpis flavis, antennis pedibusque fusco-testaceis; dense rugoso-punctatus; prothorace obsolete canaliculato; elytris minute vix perspicue flavo guttatis.

Long. $5\frac{1}{2}$ millim.

Hab. Mexico, Guanajuato (*Sallé*).

Antennæ rather long, with slender club, each joint of which is considerably longer than broad. Head excessively densely sculptured, the sculpture consisting of minute rugosities; the interocular grooves are extremely obsolete, the space between them less than the lateral space. The thorax is considerably narrowed in front and behind, the greatest width slightly in front of the middle; the rugose sculpture is deep, rather fine,

very dense, the channel very indefinite. The elytra are a good deal longer than the thorax, and their sculpture is deep, dense, and rather coarse, consisting of punctures with extremely minute interstices. The hind body is slender, rather densely punctate, each of the four or five basal segments with a single distinct cusp in the middle near the base. The legs are flavescent, with the apical half of the femur fuscescent. The male has the penultimate ventral plate slightly but broadly emarginate at the hind margin, and with a short denticle on each side of the emargination.

Though closely allied to *S. renifer*, this species has rather finer sculpture and shorter elytra; the elytral mark is so very indistinct that it can only be detected in certain lights, and when the wing-cases are quite clean and a little damp.

3. **Stenus championi.** (Tab. XVII. fig. 3.)

Nigerrimus, subopacus; abdomine cinereo-pubescente, palporum articulo basali pallido; dense sculpturatus, elytris apicem versus intricato-sculpturatis; abdomine parce obsolete punctato, segmentis basalibus ad basin profundius depressis, fere ecuspidatis.

Long. 4 millim.

Hab. MEXICO, Jalapa (*Höge*), Guanajuato, Cordova (*Sallé*); GUATEMALA, near the city, Panajachel, Dueñas, Cerro Zunil, Paso Antonio, San Gerónimo, Tactic, Senahu (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ rather short, the joints of the club not longer than broad. Head nearly as broad as the elytra; interocular grooves moderately distinct, separated by a broad space, which is broader than the lateral space. Thorax rather small, subcylindric, being only slightly broader at its greatest width in front of the elytra. Elytra a little longer than the thorax, very densely sculptured, the sculpture on the apical portions somewhat confluent and tortuous. Male characters very slight, consisting of a very slight emargination of the hind margin of the last ventral plate.

This is evidently one of the most abundant of the Staphylinidæ of our region. It does not agree with any of Casey's descriptions, but is perhaps nearest to his *S. arizonæ*. The specimens from Chiriqui have the sculpture of the elytra decidedly more tortuous than is the case in examples from the more northern parts of our region.

4. **Stenus inermis.**

Nigerrimus, subopacus; abdomine cinereo-pubescente, antennis, palpis pedibusque piceis; dense sculpturatus; abdomine parce obsolete punctato, segmentis basalibus ad basin profundius depressis, fere ecuspidatis.

Long. 4 millim.

Hab. GUATEMALA, near the city (*Champion*).

Distinguished from certain examples of *S. championi* only by the comparatively pallid colour of the palpi, legs, and antennæ; so that I am doubtful whether it may not be a variety; but as it is very rare to find variation in this respect in the species of this genus, and as I have no intermediate examples, I give it specific rank.

Three specimens.

5. **Stenus graciliventris.** (Tab. XVII. fig. 4.)

Angustus, niger, subopacus, æneo-tinctus, breviter flavo-pubescente; palpis fusco-flavis, pedibus testaceis, antennis fusco-testaceis; dense fortiterque punctatus, minus rugosus.
Long. 3½–4 millim.

Hab. GUATEMALA, El Reposo 800 feet (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet, Bugaba (*Champion*).

Palpi very slender, elongate. Antennæ rather long, the middle joint of the club quite as long as broad. Head as broad as the elytra, the eyes large, the interocular grooves very indistinct. Thorax slender, its greatest width just in front of the middle; deeply, very densely punctured, and without channel. Elytra distinctly longer than the thorax; coarsely, very closely punctured, but not rugose. Hind body slender, rather finely and closely punctate; three basal segments with a long slender cusp in the middle. Legs elongate, quite slender. Male with the third and following ventral segments deplanate, and the penultimate segment more densely pubescent; terminal segment with a very narrow elongate excision.

This little *Stenus* has the pubescence on the elytra, and even on the thorax, more distinct than its allies. We have received six examples—only one of them, a female, not in good preservation, being from Guatemala; this latter may prove, when the male is known, to be distinct, as the elytra appear slightly shorter and rather more coarsely sculptured.

6. **Stenus hostilis.**

Niger, æneo-tinctus; palpis flavis, antennarum basi pedibusque testaceis, femoribus extrorsum fuscescentibus; capite leviter excavato, simplice; prothorace elytrisque profundius fortiterque punctatis; abdomine dense punctato, brevissime pubescente.
Long. 5 millim.

Hab. MEXICO (*Truqui*, *Flohr*), Cordova (*Sallé*, *Höge*); GUATEMALA, near the city, Cerro Zunil, Chiacam, San Gerónimo (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ rather short. Head broad, the surface distinctly excavate between the eyes, but without grooves or carination. Thorax very densely and deeply punctured, with an indistinct depression on the disc. Elytra slightly longer than the thorax, deeply, densely, and coarsely punctate, the punctures to some extent confluent, so as to give rise to an intricate appearance. Hind body densely, rather finely sculptured. The male has the femora rather incrassate, the middle tibiæ very minutely mucronate inwardly at the apex, the fifth and sixth ventral plates depressed on their hinder half and emarginate behind, and the seventh segment with a broad but not deep emargination.

Although so widely distributed, we have received only a small series. The head without grooves or carination and the dense abdominal punctuation are the chief characters of *S. hostilis*.

7. **Stenus mexicanus.**

Niger; palpis flavis, pedibus testaceis, femoribus extrorsum fuscis, antennarum basi rufescente; capite medio lævigato, subcarinato; prothorace elytrisque dense profundeque punctatis; abdomine crebrius subtiliter, obsolete punctato.

Long. 5 millim.

Hab. Mexico, Cordova (*Höge*), Las Vigas (*Flohr*).

We have received only two, badly preserved, female examples of this species, which seems to be very similar to *S. hostilis*, though it will be readily distinguished from that insect by the smooth shining space along the middle of the head.

8. **Stenus nimborum.**

Sat elongatus, niger, subnitidus; palpis pedibusque fusco-rufis; dense fortiterque punctatus, vix rugosus; elytris quam prothorax paullo longioribus, hoc disco foveolato.

Long. vix 4 millim.

Hab. Guatemala, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ rather short, the middle joint of the club slightly longer than broad. Palpi sordid testaceous, the outer joint more infuscate. Head scarcely so broad as the elytra, densely rather coarsely sculptured, not excavate between the eyes; interocular grooves vague, separated by a broad indistinct interval. Thorax distinctly dilated in the middle, densely, deeply, and coarsely punctured, without channel, but with an indistinct fovea on the disc. Elytra distinctly longer than the thorax, closely and coarsely punctured, the punctuation externally slightly intricate or confluent near the middle; one or two of the intervals are sufficiently broad to be shining. Hind body rather densely and coarsely punctured, with a single cusp in the middle of the base of each segment. Legs sordid red, darker externally, so that the tarsi are nearly black. Male with the penultimate ventral segment depressed along the middle and emarginate behind, the terminal segment feebly emarginate.

An obscure species allied to the European *S. providus*. One example.

9. **Stenus mucronatus.**

Niger, sat nitidus, subæneo-tinctus; palpis flavis, pedibus antennisque sordide testaceis, his clava fusca; capite, prothorace elytrisque dense fortiterque rugoso-punctatis; abdomine parce obsoleteque punctato, parce minus breviter pubescente.

Long. 6 millim.

Hab. Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

Palpi elongate, flavescent, scarcely infuscate. Antennæ only moderately long, the middle joint of the club scarcely so long as broad. Head broad, a little narrower than the elytra; ocular grooves rather indistinct, widely separated from the eyes, but separated *inter se* only by a narrow subcarinate space. Thorax subglobose, deeply and coarsely rugose-punctate, not channelled. Elytra short, just perceptibly longer than the

thorax, deeply and coarsely rugose-punctate, the interstices more or less obliterated, so that the surface appears corroded. Hind body with a scanty but distinct setosity, the segments rather coarsely punctate at the extreme base, elsewhere almost impunctate, without true cusps. Male with the femora distinctly incrassate, and the middle and hind tibiæ mucronate internally at the apex: the ventral plates from the second onwards a little deplanate, the terminal plate with a very long narrow angular excision. Three examples.

10. **Stenus zunilensis.**

Niger, nitidus, æneo-tinctus; palpis flavis, pedibus antennisque testaceis, his clava fusca; elytris densius fortiterque rugoso-punctatis; abdomine parce punctato, parcius flavo-pubescente.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

This insect is similar to *S. mucronatus*, but is shorter, and the interocular grooves are less distinct and separated by a rather broad slightly elevated space; the punctuation of the elytra is rather denser and finer, the pubescence of the hind body is shorter, and the male characters different. In the male sex the legs are nearly simple, though there exists an excessively minute mucronation of the middle tibia, and a very slight incrassation of the femora; and the terminal ventral plate has only a broad short angular excision. Two examples.

11. **Stenus corrosus.**

Niger, sat nitidus, æneo-tinctus; palpis flavis, pedibus testaceis; antennis basi rufescente, apice nigricante; capite, prothorace elytrisque dense fortiterque rugoso-punctatis; abdomine parce punctato, longius pubescente.
Long. $6\frac{1}{2}$ millim.

Hab. PANAMA, David, Peña Blanca 4000 to 5000 feet (*Champion*).

Very closely allied to *S. mucronatus*, but with a longer less globose thorax and rather longer elytra. The male characters are almost the same, but the legs are longer, and the hind tibiæ are sinuate internally near the apex. We have only one example from each locality.

12. **Stenus punctiventris.**

Niger, æneo-tinctus; palpis flavis, pedibus testaceis, antennis fusco-testaceis; prothorace elytrisque dense profundeque rugoso-punctatis; abdomine densissime punctato.
Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Palpi elongate. Antennæ moderately long. Head broad, a little excavate, and bisulcate along the middle, the intervening space being rather broad, not at all carinate. Thorax densely covered with deep corroded sculpture. Elytra scarcely longer than the thorax, sculptured like it. Hind body very densely punctured, the pubescence neither extremely short nor elongate.

13. **Stenus repletus.** (Tab. XVII. fig. 5.)

Robustus, niger, subæneo-tinctus, perrugosus; palpis flavis, antennis pedibusque testaceis, illarum clava obscuriore; abdomine densissime punctato.
Long. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador, San Joaquin, Cerro Zunil, Tamahu, San Gerónimo (*Champion*).

Head bisulcate, the intermediate space moderately broad, not carinate. Thorax rather short, unimpressed, very deeply rugose-sculptured. Elytra a good deal longer than the thorax, very deeply and coarsely rugose; no individual punctures can be distinguished, and the erosions are vermiculate rather than granulose. Hind body densely punctured, with scanty moderately long pubescence; the segments not cuspidate. In the male the legs are much incrassate, the under surface of the body more densely pubescent, the metasternum deplanate and densely punctured, the terminal ventral plate with a large deep excision; the middle tibiæ are minutely mucronate at the apex; the hind legs very thick, the femora with the hind margin incrassate in the middle, pubescent at the base, the tibiæ obtusely angulate internally in the middle and emarginate below this. Six examples.

B. *Abdomen immarginatum.*

14. **Stenus fauvelianus.** (Tab. XVII. fig. 6.)

Elongatus, angustulus, niger, æneo-tinctus, nitidus; palpis pallide flavis, antennis pedibusque testaceis, femoribus extrorsum fuscescentibus; capite medio anguste carinato; prothorace elytrisque dense fortiterque punctatis, subrugosis; abdomine albido-pubescente, segmentis basalibus fortiter, cæteris obsolete parceque, punctatis.
Long. $4\frac{3}{4}$ millim.

Hab. MEXICO, San Pedro in Coahuila (*Palmer*), Cordova, Jalapa (*Höge*), Yautepec near Morelos (*Flohr*); GUATEMALA (*Sallé*), near the city, San Gerónimo, Cubilguitz (*Champion*); NICARAGUA, Chinandega (*Sallé*); PANAMA, David, Bugaba (*Champion*).

The male of this species has the femora slightly incrassate; the terminal ventral segment with a rather elongate excision, that preceding it with a depression on the apical portion, margined on each side with very dense, fine pubescence.

S. fauvelianus is no doubt very closely allied to the Colombian *S. chalcites*, Er., and a specimen of it was labelled with that name in Chevrolat's collection; but Erichson's description of the male characters renders it more probable that our insect is distinct. It was ticketed *S. sulcipennis*, Fauv., in Sallé's collection; but I have not preserved the name, as it is not so applicable to this species as to some of the allies, and have preferred a name in honour of the talented entomologist of Caen. It is apparently one of the commonest of the *Steni* of our region; we have received a good series both from Mexico and Guatemala, and also four examples from the State of Panama.

15. **Stenus macilentus.**

Elongatus, angustulus, niger, subæneo-tinctus, nitidus; palpis pedibusque testaceis, femoribus extrorsum subfuscescentibus; capite medio anguste carinato; prothorace elytrisque dense fortiterque punctatis; abdomine breviter albido-pubescente, segmentis basalibus dense fortiterque punctatis, apicalibus fere impunctatis.
Long. 4 millim.

Hab. GUATEMALA, near the city (*Champion*).

Very closely allied to *S. fauvelianus*, but rather smaller, and with the elytral punctuation not at all rugose, the thoracic punctuation without the transverse rugosity seen in *S. fauvelianus*; the palpi are not of a pallid flavous colour, the basal joints of the antennæ are dark in colour, and the punctuation of the basal abdominal segments is rather greater, especially on the under surface. We have received five examples of the species. The male characters apparently are similar to those of *S. fauvelianus*. *S. buccalis* is similar in appearance to this species, but has the labrum differently formed.

16. **Stenus sobrinus.**

Angustulus, niger, subæneo-tinctus, nitidus; palpis pallide flavis, antennis pedibusque testaceis, illis cumque femoribus extrorsum fuscescentibus; capite medio anguste carinato; prothorace elytrisque dense fortiterque punctatis, illo transversim subrugoso; abdomine obsolete punctato.
Long. 4 millim.

Hab. PANAMA, near the city (*Champion*).

Very closely allied to *S. fauvelianus* and *S. macilentus*, but readily to be distinguished from either by the abdominal punctuation, which, even on the basal segments, is obsolete. We have received only two female examples.

17. **Stenus solitarius.**

Angustulus, niger, nitidus; palpis flavis, antennis pedibusque testaceis, illis clava fuscescente; capite latiore, medio anguste carinato; prothorace elytrisque dense fortiterque punctatis; abdomine fortiter punctato, apice parcius punctato.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Closely allied to the preceding three species, but smaller than any of them; most similar to *S. sobrinus*, from which it differs by the coarse abdominal punctuation; the head is comparatively very broad on account of the large eyes; the punctuation of the thorax is excessively dense, but scarcely rugose, and that of the elytra is not at all rugose. We have received only one example; it is a male, and has the penultimate ventral segment broadly impressed along the middle and finely pubescent, with the lateral margins of the impression a little elevated; the preceding segment is deplanate on the middle of the hinder portion; the terminal segment cannot be seen.

18. **Stenus buccalis.**

Nigro-æneus, parum nitidus, dense fortiterque punctatus; palpis flavis, antennis pedibusque testaceis, illis basi et apice fuscescentibus; labro anterius in medio angulato prominulo; capite fortius carinato; prothorace in medio ampliato.

Long. $4\frac{1}{4}$ millim.

Hab. NICARAGUA, Managua (*Sallé*).

Head very broad, rather broader than the elytra, densely punctate, excavate, with a very conspicuous, rather broad, strongly elevated carina along the middle of the excavation. Thorax rather longer than broad, much rounded at the sides, its greatest width in front of the middle; very densely and coarsely punctate, but not rugose. Elytra scarcely longer than the thorax, densely punctate. Basal segments of the hind body very coarsely, the apical one very obsoletely, punctate. Male with a small, very narrow angular excision of the last ventral plate, the following segment depressed and pubescent along the middle for a great part of the length. Unique.

This and the following species cannot fail to be recognized, on account of the peculiar condition of the labrum.

19. **Stenus nasutus.** (Tab. XVII. fig. 7.)

Niger, vix subæneus, nitidus, fortiter punctatus; palpis pedibusque testaceis, antennis fuscis; labro in medio porrecto, acuminato; vertice medio argute et alte elevato, polito.

Long. $4\frac{1}{2}$–5 millim.

Hab. PANAMA, San Miguel in the Pearl Islands (*Champion*).

This is a very curious species, readily identified by the angularly prominent labrum; the head is very broad, coarsely punctate, with a polished strongly raised longitudinal elevation extending all along the middle. Thorax short and broad, subglobose, very coarsely and closely punctured, shining. Hind body sparingly pubescent; the basal segment coarsely punctate, the apical one nearly impunctate. Legs long and slender. Male with a rather slender excision of the last ventral plate, the preceding segment a little deplanate and near the hind margin densely pubescent. Two examples.

II. *Tarsi articulo quarto bilobo.*

A. *Abdomen marginatum.*

20. **Stenus scabrosus.**

Niger; antennis, palpis pedibusque testaceis; prothorace elytrisque dense fortiterque rugoso-punctatis; abdomine basi parce punctato, apice fere impunctato.

Long. 7 millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, El Tumbador, Las Mercedes, Cerro Zunil, Balheu, San Juan in Vera Paz, Sabo (*Champion*).

Antennæ and palpi very elongate, yellow, the club of the former only slightly darker.

Head very broad, excavate, closely punctate, with a short, broad, shining space on the middle of the vertex. Thorax rather longer than broad, the sides in front dilated and rounded, very densely rugose-punctate. Elytra broad, scarcely longer than the thorax, coarsely and closely rugose-punctate. Hind body shining, black, only finely margined; the basal segments coarsely but sparingly, the apical segments very obsoletely and very sparingly, punctured. Tarsal lobes slender, very elongate. Male with the middle tibiæ minutely mucronate at the apex internally; hind legs with the femora a little dilated, the trochanters slender, elongate, and free at the extremity, the tibiæ mucronate internally a little distance above the apex; fourth and fifth ventral segments depressed along the middle and feebly emarginate behind, the sixth deplanate and finely punctate along the middle, the seventh with a moderately large simple excision.

I have preserved the name with which this species was ticketed in Sallé's collection. The examples from Guatemala have the elytra slightly shorter than in those from Mexico. The species is apparently rare, as we have received only a dozen examples.

21. **Stenus trochanterinus.** (Tab. XVII. fig. 8, ♂.)

Niger; antennis, palpis pedibusque testaceis; prothorace elytrisque dense, fortiter profundeque rugosis; abdomine basi parce punctato, apice fere impunctato.
Long. 7 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

This species is very closely allied to *S. scabrosus*, but the sculpture of the thorax and elytra is still rougher, so that it does not appear at all like punctuation. The structure of the legs in the male is similar to that of *S. scabrosus*, but the terminal ventral segment has a deep elongate excision, the sides of which are reflexed, the notch being preceded by a deep depression, becoming narrower in front, and extending nearly to the base of the segment.

We have received a good series of this remarkable *Stenus*; the specimens do not exhibit any variation.

22. **Stenus scabripennis.**

Niger; antennis, palpis pedibusque testaceis; prothorace elytrisque dense profundeque rugoso-punctatis; abdomine fortiter punctato.
Long. $5\frac{1}{2}$ millim.

Hab. Mexico, Jalapa, Cordova (*Höge*); Guatemala, near the city, San Gerónimo, Capetillo, Panima in Vera Paz, Cubilguitz (*Champion*); Panama, Bugaba (*Champion*).

This insect also is very closely allied to *S. scabrosus*, but besides being smaller, may be readily distinguished by other characters: the thorax is considerably shorter, not at all longer than broad; the sculpture of the thorax and the elytra, though rugose and very dense, is finer; the punctuation of the hind body is more conspicuous, and on the apical segments less obsolete; the legs are shorter, and the trochanters in the male are not

spinose; the penultimate ventral segment in the male is impressed at the base as well as deplanate and finely pubescent on its apical part, and the depression of the preceding segment is confined to the hind margin.

Mr. Champion obtained a fine series of this species in Guatemala; but we have received only two examples from Mexico, and two from the State of Panama. The pair from this latter locality differ a little in possessing a somewhat finer sculpture, and being of rather shorter form.

23. **Stenus longiventris.**

Niger; antennis, palpis pedibusque testaceis, illarum clava fusca; prothorace elytrisque densissime profundeque rugoso-punctatis; abdomine angusto, basi parce fortiter punctato, apice nitido, fere impunctato.
Long. $6\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Very closely allied to *S. scabripennis*, but with a longer hind body, and this part more indistinctly margined, and much more sparingly punctured. The structure of the legs in the male is similar to that of *S. scabripennis*, but the abdominal characters are much less evident, there being only a slight deplanation of the penultimate ventral segment and that preceding it; the terminal segment has a rather large simple excision. Unique.

24. **Stenus densipennis.**

Niger, minus nitidus; antennis, palpis pedibusque testaceis, illarum clava fuscescente; prothorace elytrisque densissime punctatis, illo minus elongato, rugoso, his vix rugosis; abdomine crebre fortiterque punctato, tenuiter albido-pubescente.
Long. 4–$4\frac{1}{2}$ millim.

Hab. Panama, David in Chiriqui (*Champion*).

Readily distinguished from the variety of *S. scabripennis* found at Bugaba by the denser and less coarse sculpture of the thorax and elytra, and by the former being shorter in length. The male has a slight impression on the penultimate ventral plate, and a very slight depression on the hind margin of that preceding it; the terminal segment has a rather small excision; the mucro on the inner margin of the hind tibia is placed very near to the extremity. Two examples.

25. **Stenus ornativentris.**

Niger, minus nitidus; antennis, palpis pedibusque testaceis, femoribus posterioribus extrorsum fuscescentibus; prothorace elytrisque densissime punctatis, illo minus elongato; abdomine dense fortiterque punctato, evidenter albido-pubescente.
Long. 5 millim.

Hab. Panama, San Miguel in the Pearl Islands (*Champion*).

I am not sure that this insect will prove to be specifically distinct from *S. densipennis*, but the sculpture of the thorax and elytra appears even more dense, and the

white pubescence on the base of each segment of the abdomen is very distinct. The male characters are, I think, similar in the two species.

B. *Abdomen immarginatum.*

As this section includes the greater number of our species, and as it is here that we meet with the larger part of the peculiar forms of our region I have thought it advisable to divide it into four groups.

§ 1. *Thorax short and broad; head without polished elevation; tarsi broad, with the third joint more or less lobed or produced on one side; size considerable.*

The species of this group have North-American and European allies, e. g. *S. reconditus*, Casey, and *S. tarsalis*, Ljungh.

26. **Stenus consimilis.** (Tab. XVII. fig. 9.)

Niger, subopacus, breviter albido-pubescens; antennis palpisque flavis, illis articulo basali nigro; dense, fortiter æqualiterque punctatus; abdomine a basi ad apicem angustato; tarsis fusco-albidis.
Long. 6 millim.

Hab. Mexico (*Truqui*, *Sallé*), Las Vigas (*Flohr*), Jalapa, Cordova (*Höge*), Popocatepetl 12,500 feet (*Truqui*).

Antennæ and palpi only moderately long, yellow, each slightly sordid towards the apex, the basal joint of the former black. Head nearly as broad as the elytra, evenly and closely punctured; not excavate, rather indistinctly bisulcate, the middle portion broad, wider than the juxta-ocular interval. Thorax rather longer than its greatest width, which is a little in front of the middle, a good deal curved at the sides, much narrower than the elytra, densely and evenly punctured like the head. Elytra slightly longer than the thorax; the punctuation dense, almost the same as that of the thorax, and not at all rugose. Hind body elongate; the punctuation not differing greatly from that of the elytra, but not quite so coarse, and at the apex not so close or coarse. Legs black; tarsi pallid but more or less infuscate, the lobes very distinct, short and broad. Male with a short broad notch on the hind margin of the last ventral segment.

This insect has a more conical hind body than the European *S. tarsalis*, and at first sight reminds one rather of *S. pubescens*, Sturm, a species belonging to a different section of the genus. It is probably common, as it has been received from several sources though in small numbers; Herr Höge procured a small series at Jalapa.

27. **Stenus leucopus.**

Niger, subopacus, breviter parciusque albido-pubescens; antennis palpisque flavis; fortiter punctatus, abdomine subtilius punctato; tarsis fusco-albidis.
Long. $5\frac{1}{2}$–6 millim.

Hab. MEXICO, Jalapa, Cordova (*Höge*); GUATEMALA, San Joaquin, Volcan de Agua 8500 to 10,500 feet, Cerro Zunil, Dueñas, Purula, Sabo in Vera Paz (*Champion*).

Very closely allied to *S. consimilis*, though readily distinguished by the basal joint of the antennæ being of the same colour as the other joints; it also differs in the following respects: the antennæ and palpi are rather more elongate, the head broader, the thorax a little longer and more cylindric; the punctuation of the anterior parts is rather coarser, but that of the hind body finer, so that a considerable contrast exists between the punctures of the elytra and those of the hind body; the white pubescence is considerably less conspicuous. The male has a large deep excision on the terminal ventral plate; the antepenultimate segment is more pubescent and slightly deplanate along the middle, and the two preceding segments are slightly impressed towards their hind margins.

This is probably a common species; a good series was obtained by Herr Höge and a fair one by Mr. Champion. Mexican specimens vary a little in punctuation, and have the basal joint of the antennæ sometimes dark, probably as the result of decay of the interior of the joint, and the tibiæ usually more or less pallescent towards the extremity. The Guatemalan examples are generally slightly more coarsely punctate, and have the tibiæ more distinctly pallid and the male characters rather less developed.

28. **Stenus alticola.**

Niger, breviter parciusque albido-pubescens; antennis palpisque flavis, illis articulo basali nigro; fortiter punctatus; tarsis fusco-albidis.

Long. $5\frac{3}{4}$ millim.

Hab. GUATEMALA, Quezaltenango 7500 feet (*Champion*).

Extremely closely allied to *S. consimilis*, but of rather shorter and more robust build, with the punctuation of the anterior parts, especially of the elytra, and of the apical abdominal segments, coarser; the thorax is about as long as its greatest width. Three female examples.

29. **Stenus incognitus.**

Niger, subnitidus, evidenter albido-pubescente; antennis palpisque testaceis, illarum clava fusca, articulo basali nigro; femoribus basi rufo, extrorsum tibiisque ex parte majore nigricantibus, his ad apicem tarsisque testaceis; dense punctatus, abdomine obsolete punctato.

Long. $5–5\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, Dueñas (*Champion*).

Antennæ rather short, the basal joint dark. Head obscurely bisulcate, the vertex in the middle broadly convex. Thorax short, rounded at the sides and narrowed behind, densely and somewhat finely punctate. Elytra rather closely and moderately coarsely punctate, not elongate, but distinctly longer than the thorax. Hind body

much narrowed behind, indistinctly punctate, but with the depressed pubescence very evident. Male with a small excision on the last ventral segment.

This insect also is closely allied to *S. consimilis*, though readily distinguished by the colour of the femora; it much resembles the European *S. nitidiusculus*, which belongs, however, to another section of the genus; a fair series was obtained at Dueñas.

30. **Stenus vestigialis.**

Stenus vestigialis, Erichs. Gen. et Spec. Staph. p. 732 [1].

Hab. Mexico [1].

Apparently allied to *S. leucopus*, but, as it is stated to have a very elongate thorax, perhaps not really pertaining to this group.

§ 2. *Thorax short or not very long; head without polished elevation; tarsi slender; size small.*

These insects are allies of the North-American *S. punctatus*, Er.; the group will probably not prove capable of sharp definition from the next.

31. **Stenus docilis.** (Tab. XVII. fig. 10.)

Nigro-æneus, nitidus, fere absque pubescentia, dense fortiterque punctatus, parum elongatus, abdomine subconico; antennis, palpis pedibusque testaceis, illarum clava fusca; capite haud excavato, fere æquali.
Long. 4 millim.

Hab. Guatemala, near the city, Dueñas, San Gerónimo, El Tumbador, San Joaquin (*Champion*).

Antennæ rather long. Head nearly as broad as the elytra, extremely densely punctured, not excavate and very indistinctly sulcate on each side. Thorax rather longer than broad, much rounded at the sides, coarsely and very closely punctured. Elytra along the suture about as long as the thorax, shining; remarkably coarsely and definitely punctured, the punctuation very dense but not rugose. Hind body coarsely punctured on the basal segment, the punctuation becoming finer on each succeeding segment, so that the apical one is very finely punctured. Legs moderately long; femora scarcely at all darker externally. The male has a short, broad, angular excision of the last ventral segment; the preceding segment is nearly simple but is more pubescent behind, and at the hind margin in the middle is just perceptibly shorter.

32. **Stenus bajulus.**

Nigro-subæneus, nitidus, fere absque pubescentia, dense fortiterque punctatus, subrugosus; antennis, palpis pedibusque testaceis; capite late obsoleteque bisulcato.
Long. 4 millim.

Hab. Guatemala, near the city, Zapote (*Champion*).

The male of this species has the legs a good deal incrassate, especially the hind femora; it has a rather broad short excision on the last ventral plate, and the preceding plate rather broadly, though slightly, deplanate and finely pubescent.

We have received only two males of this species; though this sex, on account of its incrassate hind legs, is not difficult to distinguish from *S. docilis*, it is possible that the discrimination of the female will be far from easy; but probably the fact that the palpi are a little more elongate in *S. bajulus* will be a clue to its identification; the sculpture of the thorax and elytra appears to be rather denser.

33. **Stenus alumnus.**

Parvus, nigro-æneus, tenuissime pubescens, parum nitidus; antennis, palpis pedibusque testaceis; densissime fortiter punctatus, subrugosus; capite fere plano.

Long. 3–4 millim.

Hab. MEXICO, Mirador (*Höge*), Guanajuato (*Sallé*); GUATEMALA, near the city, San Gerónimo (*Champion*).

This, one of the smallest *Steni* of our region, is closely allied to *S. docilis*, but slightly smaller, more densely and rugosely, though not so coarsely, punctured, less shining, the antennæ frequently entirely flavescent, the space at the back of the head between the eyes considerably smaller, and the male characters different. The male has a moderately long narrow excision of the last ventral plate, and the segment preceding it slightly impressed, the impression not, however, extending to the hind margin, which is very slightly produced in the middle.

The North-American *S. punctatus*, Er., is very closely allied to *S. alumnus*, but has the punctuation of the terminal segments of the hind body coarser and the male characters different.

Herr Höge procured a good series at Mirador; these examples, though in bad preservation, appear to vary but little, and all have the antennæ and legs flavescent. In most of the specimens from Guatemala the club of the antennæ is dark in colour, and the femora are darker testaceous externally.

34. **Stenus addendus.**

Nigro-æneus, nitidus, tenuiter pubescens; antennis, palpis pedibusque testaceis; dense fortiterque punctatus; capite leviter bisulcato.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city (*Champion*); PANAMA, Tolé (*Champion*).

Head unusually small, irregularly and rather finely punctate, the slight elevation separating the indistinct grooves glabrous and shining. Thorax a good deal shorter than the elytra, much rounded at the sides. The male has a broad short excision of the last ventral plate. Three examples.

Though very similar to *S. alumnus* this insect is no doubt distinct; it is more distinctly pubescent, has a more uneven head, shorter thorax, and male characters similar to *S. docilis*. Only four examples have been obtained (including one male), and I am by no means sure they are all one species. The type is from Tolé.

35. **Stenus segnis.**

Niger, vix subæneus, nitidus, fortiter punctatus; antennis, palpis pedibusque testaceis, illis extrorsum nigris; capite parvo, fere plano; elytris quam prothorax parum longioribus.
Long. $3\frac{1}{4}$ millim.

Hab. PANAMA, near the city (*Champion*).

Differs from *S. alumnus* in its coarser, less rugose sculpture and more shining surface; from *S. docilis*, to which it is very similar in sculpture, by its smaller size shorter thorax, and flatter head; and from *S. addendus* by its less brassy colour, shorter and more coarsely punctured elytra, and flatter head.

We have received only four examples, all females.

36. **Stenus eremitus.**

Brevis, nigro-subæneus, nitidus, tenuiter albido-pubescens, fortiter punctatus; antennis, palpis pedibusque testaceis, his femoribus extrorsum tibiisque brunnescentibus, tibiarum basi indiscrete flavo-cingulato; capite in medio obsolete carinato; abdomine minus argute punctato.
Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Vera Cruz (*Höge*).

Antennæ moderately long. Head small, rather finely and irregularly punctate, the small median space separating the obscure grooves shining. Thorax rather longer than broad, much rounded at the sides, moderately coarsely but rather irregularly punctate, with a small indefinite shining space on the middle. Elytra longer than the thorax, rather coarsely punctate. Hind body rather sparingly and indistinctly, the basal segment more distinctly, punctate; the segments at their base furnished with very distinct white pubescence. The male has a small excision on the last ventral plate. Unique.

This little insect, though closely allied to the foregoing, makes a considerable approach in some of its details to the next group, but it appears almost equally close to *S. addendus*; the elevation on the middle of the head is much less conspicuous than it is in the next group.

§ 3. *Head with a sharply defined shining elevation on the middle; legs variegate or dark.*

This group contains some very remarkable forms with irregularly distributed punctuation and highly polished interstices; the more insignificant species in it are allied to the North-American *S. callosus*, Er. In a few species the variegation of the legs is confined to an infuscation of the extremities of the femora.

37. **Stenus micans.**

Nigerrimus, nitidus, brevissime albido-pubescens, fortius irregulariterque punctatus; antennis, palpis pedibusque fusco-testaceis, antennarum, femorum, palporum tibiarumque basibus testaceis; capite in medio angustius, minus argute, elevato et lævigato.

Long. 4 millim.

Hab. Guatemala, Cubilguitz, San Gerónimo, Dueñas (*Champion*).

Head small, only obscurely bisulcate, and with a narrow indefinite shining elevation on the middle. Thorax short and broad, only about as long as wide, rounded at the sides; coarsely but irregularly punctured, the sculpture being rugose, with here and there small indistinct smooth spaces. Elytra deeply, coarsely, and densely punctured, subrugose, shining. Hind body with the segments constricted and depressed at the base, rather feebly punctured and pubescent. Each tibia with a rather vague ring of lighter colour at its base. Male with a moderately large excision of the last ventral plate; the preceding segment slightly deplanate, pubescent, and projecting backwards in the middle. Six examples.

A rather obscure species of the *S. contractus* and *S. callosus* group; the shining elevation on the middle of the head being much less developed than in the allied forms.

38. **Stenus inanis.**

Brevis, nigerrimus, nitidus, tenuissime albido-pubescens, fere grosse punctatus; antennarum basi, palpis pedibusque testaceis, femoribus apice summo palpisque extrorsum brunnescentibus; capite parvo, vertice medio plaga elevata sat lata; prothorace rugoso, medio area angusta lævigata; abdomine conico, obsoletius punctato.

Long. $3\frac{1}{2}$ millim.

Hab. Panama, David in Chiriqui (*Champion*).

A distinct little insect somewhat resembling *S. callosus*, Er., but of shorter form, with smaller head and much coarser punctuation; easily distinguished from *S. micans* by the pallid legs and the much smaller head. The thorax is small, much narrower than the elytra, much rounded at the sides, coarsely and rugosely punctured, shining, with a narrow impunctate space on the disc. Elytra convex, longer than the thorax, very coarsely punctate, very shining. Hind body conical; the basal segment rugosely punctate, the others nearly impunctate.

One female.

39. **Stenus peregrinus.**

Nigerrimus, nitidus, tenuissime albido-pubescens, fere grosse punctatus; antennarum basi, palpis pedibusque testaceis; capite haud lato, vertice medio parum argute lævigato; prothorace fortius rugoso, medio area angusta lævigata parum discreta.

Long. 4 millim.

Hab. Panama, David in Chiriqui (*Champion*).

This insect has a rather broader head than *S. inanis*; the thorax is a little broader,

the elytra rather shorter, and the legs longer. I have little doubt it is a distinct species, though only one female example has been obtained.

40. **Stenus ambulator.**

Nigerrimus, nitidus, fortiter punctatus; antennarum, palporum, femorum tibiarumque basibus testaceis; capite bisulcato, vertice in medio latius sat argute elevato et polito; prothorace brevi, basi subconstricto, fortiter punctato, medio area lævigata parum discreta.
Long. 4 millim.

Hab. GUATEMALA, Cubilguitz, San Gerónimo, Dueñas (*Champion*).

Very similar to *S. micans*; but the pubescence of the anterior parts almost wanting, the head considerably broader and with the smooth elevation on the middle of the vertex wider, the elytral punctuation more scanty, and the male characters very different. The head is about as broad as the elytra. The thorax is short, only about as long as broad, strongly rounded at the sides, closely but unequally punctate. Elytra coarsely but rather sparingly punctate. Tibiæ fusco-testaceous, paler at the knee, but without definite annulation there. Male with a broad very short excision of the last ventral plate; the preceding segment nearly simple, but feebly deplanate, and with the hind margin just perceptibly emarginate.

Four examples. The description is made from the two found at Dueñas; the other two are females, and differ slightly.

41. **Stenus gentilis.** (Tab. XVII. fig. 11.)

Gracilior, nigerrimus, nitidus, tenuissime pubescens; antennis, palpis pedibusque rufo-testaceis, illis extrorsum femorumque apicibus fuscis; vertice plaga elevata, lata et arguta; prothorace fere subcylindrico, irregulariter punctato; elytris parce punctatis.
Long. 4 millim.

Hab. GUATEMALA, Cubilguitz 1000 feet (*Champion*).

Palpi testaceous, the terminal joint rather more sordid. Head only moderately broad, the elevation on the vertex very distinct and wide. Thorax rather narrow, gently rounded at the sides, rather uneven, coarsely and irregularly punctate, with a space on the middle impunctate. Elytra longer than the thorax, rather closely and coarsely punctate, a little rugose on a slightly depressed space behind the shoulders. Hind body rather slender, feebly punctate, terminated by two distinct slender setæ. Legs rather long; yellowish-red, the tips of the femora darker, the tibiæ more or less slightly infuscate. Male with a very broad moderately deep excision of the last ventral plate; the preceding segment with the pubescence projecting backwards in the middle behind the margin. Six examples.

This insect is easily distinguished, though to a considerable extent intermediate between *S. ambulator* and *S. salvini*. The thorax is much more cylindric than in the former, and the legs are different in coloration from either of the two species mentioned.

42. **Stenus megops.**

Nigerrimus, nitidissimus; palpis pedibusque dilute flavis, femorum apicibus angustissime fuscescentibus; antennis testaceis, extrorsum fuscescentibus; capite lato, parum punctato, profundissime bisulcato; prothorace brevi, basin versus angustiore; elytris convexis, quadratis, parce fere grosse punctatis.
Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

Head very broad, the median elevation wide and elongate. Thorax a good deal broader in the middle, coarsely, irregularly punctate. Hind body polished and shining, with a few punctures on the basal segments. One female example, in bad preservation. Very distinct from the allied species by the deep frontal furrows; and in the dilute almost immaculate legs resembling *S. inanis*.

Two examples.

43. **Stenus lætipes.**

Nigerrimus, nitidus; antennarum basi, palpis, femorum tibiarumque dimidiis basalibus læte flavis, tarsis fusco-flavis; grosse irregulariter punctatus; vertice plaga elevata, polita, elongata.
Long. $4\frac{1}{4}$ millim.

Hab. Mexico, Mirador (*Höge*).

Head with the median elevation very abrupt. Thorax not longer than broad, rugosely punctate, with a space on the middle shining. Elytra rugosely and very coarsely, but unequally punctured, the punctures being scanty on some parts. Hind body shining and polished.

We have received only one badly-preserved female without antennæ. The species will be probably distinguishable by the great and abrupt contrast in the colours of the different parts of the legs. In *S. laceratus* the bases of the femora are nearly black; here the basal half is bright yellow, the outer half black.

44. **Stenus laceratus.**

Gracilis, nigerrimus, sat nitidus, rugosus; antennarum tibiarumque basibus palpisque flavis, antennis tibiisque extrorsum cum tarsis fusco-flavis; vertice medio plaga elongata, elevata, nitida; elytris dense fortiterque rugoso-punctatis.
Long. $4\frac{3}{4}$ millim.

Hab. Mexico, Yautepec, Morelos (*Flohr*).

Head moderately large. Thorax about as long as broad, strongly rounded at the sides, rugosely punctate, with an impunctate space on the middle. Elytra rather longer than the thorax, very rugosely, densely, and coarsely punctate. Hind body very feebly punctate, sparingly furnished with a whitish pubescence; terminal setæ excessively minute.

Of this species we have received only one female example. The dense rugose punctuation of the elytra readily distinguishes it.

45. **Stenus asperatus.**

Nigerrimus, sat nitidus, densius, fortius profundissimeque punctatus, rugosus; antennarum basi, palpis, femorum tibiarumque dimidiis basalibus flavis, tarsis fusco-testaceis; vertice medio plaga elongata, elevata, nitida; prothorace medio area parva lævigata.

Long. $4\frac{3}{4}$ millim.

Hab. Guatemala, Cahabon 1000 feet (*Champion*).

Readily distinguished from all the allied species, except *S. laceratus*, by the externally dense coarse punctuation of the thorax and elytra; from *S. laceratus* it differs by the basal half of each femur being bright yellow, and by the rather coarser punctuation. The male characters are slight, there being a shallow angular emargination of the last ventral segment, that preceding being a little deplanate along the middle and finely pubescent.

46. **Stenus salvini.** (Tab. XVII. fig. 12.)

Sat elongatus, nigerrimus, nitidus, inæqualiter minus denseque punctatus; prothorace utrinque tuberculato; palpis pallide flavis; antennis pedibusque testaceis, illis extrorsum, femorum apicibus tibiisque plus minusve late fuscescentibus; abdominis apice longius bisetoso.

Long. 5 millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet, Bugaba (*Champion*).

Palpi elongate, clear yellow. Head rather broad, deeply bisulcate; with a highly polished elongate elevation extending from the vertex to near the labrum, but narrower in front. Thorax longer than broad, with a small but distinct angular tubercle on the middle of each side, coarsely and irregularly punctate, with a smooth space along the middle. Elytra longer than the thorax, sparingly unequally punctate. Hind body subcylindric, polished and shining, with a few punctures on the basal segment. Male with an elongate, very definite, nearly parallel-sided excision of the last ventral segment; the penultimate segment broadly deplanate and finely pubescent, and the one preceding deplanate and pubescent on the hind margin.

Nearly a dozen examples were procured of this elegant and distinct *Stenus*; the under surface is strongly pubescent (like many other *Steni*), in striking contrast to the polished and shining upper surface.

47. **Stenus remotus.**

Gracilior, nigerrimus, nitidissimus, parcius grosse punctatus; palpis femorumque basibus flavis; antennis tibiisque testaceis, extrorsum fuscescentibus; capite parum punctato, profundissime bisulcato; prothorace disco area majore lævigata.

Long. 4 millim.

Hab. Guatemala, Coatepeque, San Gerónimo, Panima in Vera Paz (*Champion*).

Thorax rounded at the sides, without lateral tubercle, irregularly punctate, with a rather large impunctate space on the disc, rugose at the sides, rather slender, a little

longer than broad. Elytra very shining; irregularly, very coarsely, rather sparingly punctate. Hind body punctured only on the basal segment, the other segments very shining. Legs long; femora bright yellow on the basal half, the outer half nearly black; tibiæ testaceous, the apical half darker; tarsi fusco-testaceous. The male has an extremely short notch or emargination on the terminal ventral plate; the preceding plate deplanate on the middle, feebly pubescent, the hind margin slightly emarginate.

Four examples.

This insect is smaller than *S. salvini* and destitute of the thoracic tubercles.

48. **Stenus scutiger.**

Gracilior, nigerrimus, nitidus; antennarum basi palpisque sordide testaceis: tibiarum basi summo plus minusve anguste flavescente; parce irregulariterque punctatus; capite profundissime bisulcato.

Long. $4\frac{3}{4}$ millim.

Hab. PANAMA, David, Bugaba, Caldera, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Head with a large, elongate, wedge-shaped, polished elevation on the vertex. Thorax slender, rather longer than broad, a good deal rounded at the sides; very irregularly punctate, the punctuation being in some places rugose, while other spots are polished and free from sculpture. Elytra rather longer than the thorax, coarsely but sparingly and irregularly punctured. Basal segment of the hind body rugose, the other segments polished and shining. Male with a slight angular emargination of the last ventral segment.

The small series of this insect shows some variation in sculpture and in the amount of yellow colour at the bases of the tibiæ. Possibly there may be more than one species; but the material leaves this quite uncertain.

49. **Stenus exulans.**

Gracilis, nigerrimus, nitidus; antennarum palpisque fusco-nigris, his articulo basali flavo; tibiis basibus testaceo-annulatis; prothorace minus gracile, lateribus rotundatis, posterius angustato, irregulariter punctato, areis majoribus lævigatis; elytris parce irregulariterque punctatis; capite profundissime bisulcato.

Long. $5\frac{1}{4}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

The dark palpi, legs, and antennæ render it impossible to confound this species with any of the allies except *S. scutiger*; and to that species *S. exulans* is closely allied, but is a more robust insect, with broader thorax and darker antennæ and palpi; and the male has a moderately deep angular excision on the last ventral plate, and an emargination of the hind margin of that preceding it. Unique.

§ 4. *Thorax very elongate, nearly cylindric; head without a definite polished elevation on the middle; legs unicolorous, pallid.*

This interesting group has numerous representatives in Tropical South America, and also in other parts of the world. They appear to be rare insects and not met with gregariously. The head is usually very broad, with the eyes very widely separated, and underneath the genæ are of unusual width, so that the eyes are not visible on the under surface of the head; this latter character is not, however, constant, and I have in consequence at present included in the group some species, such as *S. sagax*, which do not differ from the normal *Steni* in this latter respect. In the more remarkable species of the group the segment of the armature in the males becomes developed in an extraordinary manner.

50. **Stenus aculeatus.** (Tab. XVII. fig. 14, ♂.)

Niger, parum nitidus; antennis, palpis pedibusque flavis; dense fortiterque punctatus; capite lato, leviter excavato, plano; elytris quam prothorax paullo brevioribus.
Long. 6 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Antennæ and palpi extremely elongate. Head very broad. Thorax nearly twice as long as broad; very densely punctured, almost rugose. Elytra narrowing somewhat from the apex to the base, so that the shoulders are not very prominent; densely and very coarsely punctate. Hind body coarsely punctate, the apical segments more sparingly than the basal. In the male the ventral plate of the armature is prolonged to form an elongate, very acuminate spine, the terminal segment bears a large and deep notch, and the preceding segment is pubescent along the middle.

51. **Stenus armatus.**

Niger, sat nitidus, elytris vix æneo-tinctis; antennis, palpis pedibusque flavis; dense fortiterque punctatus; capite lato, leviter excavato; elytris prothoracis longitudine; abdomine fortiter punctato.
Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 6000 feet (*Champion*).

Antennæ and palpi extremely elongate. Head very broad, a little excavate, with a very feeble convexity along the middle. Thorax nearly twice as long as broad, coarsely, very densely punctured, a good deal rounded at the sides. Elytra just about as long as the thorax, closely and extremely coarsely punctured, the shoulders moderately prominent. The punctuation of the apical segment definite, though finer and less dense than that of the basal segments. In the male the ventral plate of the armature is produced to form a curious laterally compressed process or lamina with rounded extremity, the terminal ventral plate bears a rather large notch, and the preceding segment is finely pubescent along the middle.

52. **Stenus godmani.** (Tab. XVII. fig. 13.)

Niger, supra calvus, sat nitidus; antennis, palpis pedibusque pallide flavis; capite excavato, disco fortius parciusque punctato; prothorace densissime fortiterque punctato, quam elytris paullo breviore.
Long. 6 millim.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Zapote (*Champion*).

Palpi very long, their terminal joint about twice as long as the space separating the antennæ at their insertion. Antennæ very long, the club elongate but very abrupt, the eighth joint being long and very slender. Head rather deeply excavate, not sulcate, evidently more coarsely and sparingly punctured on the middle. Thorax very elongate, nearly twice as long as broad, subcylindric, a little curved at the sides; coarsely and very densely punctured, almost rugose. Elytra a little longer than the thorax, with rather abrupt shoulders, the punctuation coarser and not quite so close as that of the thorax. Hind body coarsely, moderately closely punctured, the terminal segment obsoletely punctate. Male with the ventral plate of the armature large, flat, deeply emarginate at the tip; the terminal (seventh) segment with a very deep and broad sharply-defined excision which is rounded in front; the sixth segment impressed and finely pubescent along the middle, with the sides of the impression a little elevated behind; the four preceding segments flattened and glabrous in the middle behind.

53. **Stenus cribriceps.** (Tab. XVII. fig. 15.)

Nigro-subviridis, nitidus; antennis, palpis pedibusque flavis; capite leviter excavato; dense punctatus; abdomine basi crebre sat fortiter punctato, segmentis apicalibus multo obsoletius et parcius punctatis.
Long. 6 millim.

Hab. Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*), Chiriqui (*Ribbe*).

Antennæ and palpi very elongate. Head broad, coarsely but evenly punctate, slightly excavate, flat, with a very slight, fine, minute carination along the middle. Thorax nearly twice as broad as long, very slender, very densely punctured, subrugose. Elytra densely and coarsely punctured, about as long as the thorax, the shoulders well-marked. Male with the segment of the armature very long; its ventral plate simple, feebly emarginate at the tip; the preceding segment with a rather narrow, deep, angular excision; the sixth segment furnished with very minute fine pubescence along the middle, and there is also a little of such pubescence on the posterior part of the preceding segment.

The metallic tint, rather less developed sculpture of the hind body, and the unusually coarse sculpture of the under surface of the head distinguish this species, independently of the male characters. We have received only one example from each source: with the exception of the typical individual from the Volcan de Chiriqui, all are females, and it is possible, as they differ a little from one another, they may not all be one species. We figure the female example found by Ribbe in Chiriqui.

54. **Stenus chiriquensis.**

Gracilior, niger, vix perspicue metallescens, nitidus; antennis, palpis pedibusque flavis; capite fere plano; prothorace cylindrico, densissime punctato, fere rugoso; elytris humeris rectis, densissime punctatis; abdomine segmentis duobus ultimis impunctatis.
Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, David in Chiriqui (*Champion*).

This is one of the most slender species, and greatly resembles *S. placidus* and *S. albipes*, but may be distinguished from both by the terminal two (before the armature) abdominal segments being quite without punctures; it has, moreover, the punctuation of the thorax and elytra denser, and the shoulders of the latter more prominent; it is one of the most densely punctured *Steni*. One female.

55. **Stenus cylindricus.**

Gracilior, niger, nitidus; antennis, palpis pedibusque flavis; capite leviter excavato, medio parce punctato; prothorace elongato, angusto, cylindrico, fortiter punctato; elytris prothoracis longitudine, fortius punctatis; abdominis apice fere impunctato.
Long. 6 millim.

Hab. MEXICO (*coll. Chevrolat*), Cordova, Jalapa (*Höge*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, Zapote, San Gerónimo, Purula, Chiacam (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This species is closely allied to *S. godmani*, but the male characters are different; it may also be readily distinguished from that species by the antennæ being less elongate, with a very much shorter club, the head smaller and the vertex flatter, the thorax narrower and more cylindric, and the latter and the elytra less densely punctate. In the male the segment of the armature is only about half as large as it is in *S. godmani*, and its ventral plate is not emarginate at the tip; the terminal segment has an elongate narrow excision; the preceding segment is emarginate at the tip, depressed along the middle, and there covered with very dense and minute pallid pubescence.

We have received a small series from Mexico and also from British Honduras, and these specimens agree well; but from the more southern localities the unique exponents are, without exception, females, and as they all differ, more or less, from the Mexican series, it is possible they may not all belong to this species.

56. **Stenus placidus.**

Angustior, elongatus, nigerrimus, nitidus; antennis, palpis pedibusque pallide flavis; capite leviter excavato, disco parcius punctato; prothorace elytrisque fortiter punctatis, his angustis; abdomine fortiter punctato.
Long. $5\frac{1}{4}$ millim.

Hab. PANAMA, Peña Blanca 3000 to 4000 feet (*Champion*).

In this species the male has the ventral plate of the armature with a small shallow

emargination in the middle of the hind margin; the last ventral segment has an incision that is very deep and very narrow in front; the preceding segment is broadly depressed behind, and densely set with very minute, almost snow-white, pubescence, the hind margin being emarginate.

Though this insect is extremely similar to *S. albipes*, the male characters are nearer to those of *S. cylindricus*; it differs from the former in having the elytra rather narrower, less convex, and not quite so coarsely punctured. It is only half the size of *S. cylindricus*, has the dorsal plate of the last true segment more punctured, and the male characters a little different, the extremely narrow elongate incision being remarkable. Unique.

57. **Stenus albipes.**

Elongatus, nigerrimus, nitidus; antennis, palpis pedibusque pallide flavis; capite fere plano, sat crebre punctato; prothorace elytrisque fortiter punctatis, illo cylindrico.
Long. 4 millim.

Hab. Mexico, Teapa, Cordova (*Sallé*), Jalapa (*Höge*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Zapote (*Champion*); Nicaragua, Chontales (*Janson*).

Antennæ and palpi very elongate. Head moderately broad, nearly flat, moderately closely and coarsely punctured. Thorax narrow, almost perfectly cylindrical, being very nearly straight at the sides. Elytra rather convex, scarcely longer than the thorax, very coarsely punctured, very shining. Hind body rather sparingly, coarsely punctured, the terminal segments nearly impunctate. Legs very pale yellow. Male with the segment of the armature small and simple, the last ventral plate with a moderately large and deep excision, the preceding segment feebly pubescent on the middle.

Besides being only half the size of *S. cylindricus*, this species has a more closely punctured head and different male characters. We have a fair series from Mexico and British Honduras, one exponent from Guatemala, and several from Nicaragua; the specimens from these latter two localities do not quite agree, but as the external male characters are almost the same, they cannot be satisfactorily separated.

58. **Stenus cylindricollis.**

Angustus, cyaneo-niger, nitidus; antennis, palpis pedibusque flavis; capite sat lato, leviter excavato, parcius punctato, nitido; prothorace cylindrico, crebrius fortiterque punctato, nitido; elytris fortius punctatis, nitidis; abdomine parce punctato.
Long. 5 millim.

Hab. British Honduras, R. Hondo (*Blancaneaux*).

This species is similar in size and punctuation to *S. albipes*, but, besides the cyaneous colour, it exhibits other distinctions, the head being a little excavate and more sparingly punctured, and the punctuation of the hind body less. It is one of the species in which the upper surface is almost completely destitute of pubescence. One female.

59. **Stenus detector.**

Niger, parum nitidus; densissime fortiterque punctatus; antennis, palpis pedibusque flavis; capite latiore, evidenter excavato.
Long. 5 millim.

Hab. PANAMA, Bugaba, Tolé (*Champion*).

Antennæ and palpi very elongate. Head extremely broad, broader than the elytra, evidently excavated, scarcely visibly bisulcate, closely punctate. Thorax very densely, deeply, and closely punctate, elongate, but much rounded at the sides. Elytra almost shorter than the thorax, very coarsely and densely punctured, subrugose. Hind body unusually coarsely punctured at the base, more finely so at the apex. Male with a moderately large excision of the last ventral plate. Two examples.

A distinct species allied to *S. sagax*.

60. **Stenus guatemalenus.**

Elongatus, nigerrimus, nitidus, subtiliter albido-pubescens; antennis, palpis pedibusque pallide flavis; dense punctatus; capite fere plano; abdomine segmento basali ad basin evidenter pubescente.
Long. 5 millim.

Hab. GUATEMALA, Cahabon 1000 feet (*Champion*).

Antennæ moderately long. Head broad, scarcely excavate, flat, rather sparingly punctured on the middle. Thorax very narrow, but distinctly curved at the sides; densely though not very coarsely punctured. Elytra not longer than the thorax; closely and coarsely punctured, more densely so at the extreme base. Hind body closely, moderately coarsely punctured. Male with a rather large excision on the last ventral plate. Unique.

This species much resembles *S. albipes*, but makes an approximation in form and pubescence to *S. sagax* and its allies; the specimen is not in good preservation, and, if fresh, the pubescence might be greater.

61. **Stenus sagax.** (Tab. XVII. fig. 16.)

Niger, subænescens, subtiliter albido-pubescens; antennis, palpis pedibusque flavis; dense punctatus; elytris ad basin evidentius albido-pubescentibus.
Long. 4½ millim.

Hab. GUATEMALA, Torola (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ elongate. Head broad, with very prominent eyes, slightly excavate, flat, closely punctured. Thorax not twice as long as broad, a good deal curved at the sides; coarsely and very densely punctured, almost rugose. Elytra along the suture about as long as the thorax, coarsely and densely punctured. Hind body rather densely, moderately coarsely punctured, the apical segments more finely so; each of the basal segments more

distinctly pubescent at the base. Male with a rather large excision on the last ventral plate, and a finer punctuation and pubescence on that preceding it.

62. **Stenus chontalenus.**

Niger, evidenter pubescens, parum nitidus, dense punctatus; antennis, palpis pedibusque flavis; capite leviter excavato; elytris abdomineque segmentis basalibus singulo ad basin densius albido-pubescente.
Long. 4½–5 millim.

Hab. NICARAGUA, Chontales (*Janson*).

This insect is very closely allied to *S. sagax*, but is rather more slender, without metallic tint, and with the punctuation more indistinct on account of the more conspicuous pubescence. The male characters are almost the same. Three examples.

63. **Stenus deceptor.**

Niger, subnitidus, dense punctatus; antennis, palpis pedibusque flavis, illis minus elongatis; capite obsolete bisulcato.
Long. 6 millim.

Hab. GUATEMALA, near the city (*Champion*).

Head moderately broad, not at all excavate, broadly indistinctly bisulcate, closely punctate. Antennæ only moderately long, gradually thickened from the sixth joint onwards. Thorax not twice as long as broad, a good deal curved at the sides, coarsely and closely punctured. Elytra slightly longer than the thorax, coarsely and closely punctured. Hind body at the base moderately coarsely, at the apex quite obsoletely, punctured. One female.

This species is readily distinguished from *S. cylindricus* and *S. albipes* by the shorter antennæ and the subsulcate head; it is larger than *S. flohri*, with closer punctuation and a differently shaped hind body, the segments being scarcely at all constricted.

64. **Stenus flohri.**

Angustior, niger, nitidus; antennis, palpis pedibusque pallide flavis; capite vix excavato, utrinque leviter sulcato; prothorace elytrisque fortiter punctatis; abdomine minus argute punctato, subtiliter pubescente.
Long. 5 millim.

Hab. MEXICO, Cuantla (*Flohr*).

I have received only one example of this species, but, though in bad preservation, there is no doubt of its being distinct; it is a male, and has only a very short broad emargination of the last ventral segment, the preceding segment being slightly deplanate and a little pubescent along the middle. The female will, no doubt, be readily distinguished from *S. albipes* by the head being a little depressed on each side and the hind body more obsoletely punctured, with scanty but distinct pubescence.

65. **Stenus suaveolus.**

Cyaneus, nitidus; antennis, palpis pedibusque flavis, illis extrorsum fuscescentibus; capite bisulcato; prothorace subcylindrico, medio subcarinato; abdomine pubescente, obsolete punctato.
Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

Antennæ very long, almost gradually thickened from the middle to the extremity. Head moderately broad, not at all excavate, sparingly punctured, indistinctly bisulcate, the wide median interstice a little convex and still more sparingly punctured. Thorax very elongate, a good deal curved at the sides, rather closely and irregularly but not very coarsely punctured, with an abbreviated shining smooth space along the middle. Elytra scarcely longer than the thorax, more coarsely and less closely punctured. Hind body only finely punctured, but more than usually pubescent.

One female, in bad preservation. A very distinct species.

66. **Stenus podagricus.** (Tab. XVII. fig. 17.)

Cyaneo-niger, nitidus, pube depressa evidenter vestitus; antennis, palpis pedibusque flavis; capite late obsoleteque bisulcato; abdomine obsolete punctato.
Long. $6\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ and palpi very long. Head not so broad as the elytra, rather densely pubescent, finely punctate, broadly but rather indefinitely impressed on each side. Thorax not twice as long as broad, curved at the sides, moderately, finely, and not very densely punctate, with distinct depressed pubescence. Elytra shining, rather sparingly punctured, with a white pubescence very conspicuous on the basal part. Hind body almost impunctate, with distinct depressed white pubescence. Male with the ventral plates depressed along the middle from the base to the fifth segment; sixth segment obsoletely pubescent along the middle, the seventh with an elongate excision not broader at its commencement than near its termination; hind legs greatly swollen, the femur in the middle behind with a truncate prominence, the tibia angularly dilated internally in the middle and below this excised and pubescent.

Two examples. *S. cerritus* from the Amazons, and an undescribed species from Rio Janeiro, in my collection, have the hind legs similarly formed.

Subfam. *MEGALOPINÆ.*

Erichson placed the genus *Megalops* as a separate group of "Oxytelini;" in the Munich Catalogue it is placed in "Steninæ." I cannot persuade myself at present that it can be correctly placed in either of these subfamilies, and I therefore isolate it. It is perhaps more nearly allied to "Evæsthetinæ" than to any other of the subfamilies, and, if this be the case, it would naturally be placed between that subfamily and the "Steninæ."

MEGALOPS.

Megalops, Erichson, Gen. et Spec. Staph. p. 751; Sharp, Trans. Ent. Soc. Lond. 1876, p. 378.

In addition to the characters already pointed out by Erichson and myself, I can now add the following information:—The antennæ, in certain species, are distinctly 11-jointed, when the basal joint evidently projects beyond the margin of the head; in other cases, however, the basal joint cannot be thus detected, and the antennæ then appear 10-jointed, as they were described to be by Erichson. The structure of the tarsi also exhibits some important modifications: in the majority of the species they are evidently 5-jointed, and formed as described by Erichson (*l. c.*); in a few species (e. g. *M. præditus*) the fourth joint is so imperfectly separated from the terminal one that the distinction between the two articulations is difficult to detect; a third modification is the very peculiar one described by me (*l. c.*), in which the fourth joint, though apparently absent, exists as a slender lobe placed beneath and closely applied to the terminal joint.

Hitherto only twelve species of this peculiar genus have been described—two from North America, six from South America, two from Australia, and one each from Java and South Africa. The tropics of the New World are, however, certainly the region most favoured by these insects, as, in addition to the very remarkable series here described, I have some ten or twelve nondescript species from South America.

Some species have been recorded as frequenting chips of wood; Mr. Champion informs me that he found them in this way, and also in moss and fungus on stumps and recently felled timber.

§ 1. *Tarsi simple.*

1. **Megalops cruciger.** (Tab. XVII. fig. 18, ♂.)

Niger, nitidus, elytris cruce testacea magna signatis; antennis rufis, pedibus flavis; prothorace parce punctato, sat profunde parum regulariter transversim sulcato; elytro singulo medio punctis quinque impressis. Long. 4 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Zapote, Capetillo, Las Mercedes, Cerro Zunil, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui 2000 to 4000 feet, Bugaba (*Champion*).

Head with a large irregular horseshoe-shaped impression embracing the greater part of the front and open behind, this impression more or less distinctly crenate or plicate in places; a narrow groove separates the elevation by which it is limited from the eye, and there are four punctures, two on the disc, two on the vertex. Thorax about as long as broad, with a transverse groove extending across it parallel to and very near the front margin, this groove being formed more or less distinctly by large punctures

joined together; basal margin sharply elevated, the surface depressed in front of it, and furnished with a series of transverse punctures; besides this there are, on each side, two convergent depressions, and at the point where the four depressions nearly meet on the disc there is a large depression or some punctures. The elytra are largely variegate with yellow, a common mark on the disc and each outer angle being black; each bears five punctures placed in two short series near one another, three on the internal, two on the external series. The male has the terminal joint of the antenna elongate and armed with long hairs; the club is more or less dark in colour.

M. cruciger is the predominant *Megalops* of our region; we have, indeed, received nearly as many examples of it as we have of all the other species together; it varies a little in the extent of the yellow marks on the elytra, so that the outer quadrangular black marks are sometimes connected with the discoidal mark by their angles. The punctures on the elytra vary considerably in number, and this apparently in connection with locality; but I am not able to distinguish more than one species. We have only one example from Mexico, and I very much doubt whether it really pertains to the species, as the sculpture of the head and thorax is rather more largely developed, and the femora are a little infuscate; but this latter difference may be due to decay, as the example is in bad preservation.

2. **Megalops mexicanus.**

Niger, nitidissimus, elytris fascia irregulare flava transversa signatis; antennis pedibusque testaceis, illarum clava nigra, his femoribus apice nigricante, tibiis basin versus plus minusve fuscescentibus; capite prothoraceque punctis impressis numerosis, hoc profunde transversim sulcato; elytro singulo seriebus brevibus approximatis duobus punctorum impressorum.

Long. 5 millim.

Hab. MEXICO, Jalapa (*Höge*), Cordova (*Sallé*).

Though closely allied to *M. cruciger*, I have no doubt this insect is distinct therefrom; it is broader, with many punctures on the upper part of the head, and with the yellow marks confined to the basal half of the elytra. The coloration of the legs, if it proves constant, will be an easy means of separating the two. One example from each locality.

3. **Megalops adjectus.**

Niger, nitidus, elytris fascia sub-basali testacea; antennis pedibusque flavis; prothorace crebrius punctato-sulcato; elytris seriebus duabus elongatis punctorum et ad latera punctis nonnullis impressis.

Long. 4 millim.

Hab. GUATEMALA, Zapote, San Isidro (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Head with numerous punctures on the space between the eyes. Thorax with an anterior transverse punctate sulcus, and behind this a second punctate groove

with two discoidal punctate impressions, an external lateral impression, and a not very definite transverse basal sulcus placed immediately in front of the basal margin. Elytra scarcely so long as the thorax, with two very closely placed series of large punctures, and on the deflexed lateral margin a patch of two or three punctures about the middle.

Three examples from Guatemala, one from the State of Panama.

Readily distinguished from its allies by the additional punctures on the outside of the elytra.

4. **Megalops morosus.**

Niger, nitidissimus, elytris maculis humeralibus et suturalibus testaceis; antennis pedibusque flavis; prothorace minus grosse sulcato et punctato; elytris seriebus duabus brevissimis punctorum.
Long. 4 millim.

Hab. GUATEMALA, Zapote, Cahabon (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Head with numerous punctures on the space between the eyes. Thorax with punctured grooves, as in *M. cruciger*, but the grooves are not so broad or deep, and are interrupted on the middle. Elytra about as long as the thorax; each with a yellow spot on the shoulder, and another similarly coloured spot on the suture at the apex; and with two very short series of punctures, two or three punctures only in each series. Two examples.

This species may be distinguished from the varieties of *M. cruciger* with small yellow markings by the yellow spot at the shoulder. Two examples from Guatemala and a like number from the State of Panama.

5. **Megalops armatus.**

Niger, nitidus, elytro singulo fascia curvata testacea; antennis pedibusque flavis; elytris inæqualibus, seriebus duabus brevibus punctorum impressorum.
Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Head with coarse punctures on the space between the eyes. Thorax with four punctured grooves, the two inner ones interrupted in the middle. Elytra longer than the thorax, each with a curved yellow mark extending from near the scutellum to the middle of the outer margin, and with two deep grooves formed by nearly united punctures, and with the space between these and the suture at the base a little elevated. Male with the terminal joint of the antenna elongate and setose, and the penultimate ventral segment armed with a long spine projecting backwards. Two examples.

6. **Megalops modestus.**

Niger, nitidus, elytris basi apiceque testaceo-signatis; antennis pedibusque flavis, femoribus posterioribus extrorsum fuscescentibus; prothorace minus sulcato et punctato.
Long. $3\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Head similar to that of *M. cruciger*. Thorax with the anterior margin picescent, with a slender punctate groove behind this, and another fine groove across the middle, and a slight depression in front of the base; besides this with only a few punctures. Elytra with a testaceous spot close to the shoulder, and the hind margin testaceous for a great part of its width, this colour being more extensive near the suture; each with a series of three punctures and one or two punctures adjacent to it. Club of the antennæ in the male not in itself very elongate, but adorned with long setæ. Unique.

7. **Megalops ineptus.**

Niger, nitidus, elytris fascia magna testacea in medio ad marginem posteriorem descendente; antennis pedibusque flavis; prothorace parce punctato, sulcato, sulcis intermediis in medio late interruptis; elytro singulo seriebus punctorum duobus abbreviatis.
Long. $3\frac{3}{4}$ millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

This species differs from *M. cruciger* in wanting the large depression on the middle of the thorax, and also in the fact that the yellow colour on the wing-cases does not, at the suture, extend forwards towards the scutellum. Although we have received only one female, I think it indicates a different species.

8. **Megalops integer.** (Tab. XVII. fig. 19.)

Niger, nitidus, elytris fascia magna ad suturam interrupta testacea; antennis pedibusque flavis; capite prothoraceque haud numerose punctatis, hoc sulcato; elytris tantum ad basin punctis impressis.
Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

Eyes rather small. Head with only a few punctures. Thorax with a transverse, punctate groove near the front, another across the middle, and with the base depressed and punctate in front of the margin, and with only a few additional punctures. Elytra each with a large spot, extending from the outer margin to near the suture, so as to form an interrupted band.

One male. In this sex the terminal joint of the antennæ is very elongate, not acuminate as in *M. cruciger*, but gently rounded at the apex. In this example there is a single puncture on the right elytron, very near the shoulder, but none on the left.

9. **Megalops cognatus.**

Niger, nitidus, elytro singulo macula magna externa testacea; antennis pedibusque flavis; capite prothoraceque haud numerose punctatis, hoc sulcato; elytris pone humeros punctis quatuor impressis.
Long. $4\frac{1}{4}$ millim.

Hab. Panama, Volcan de Chiriqui between 2000 and 4000 feet (*Champion*).

This species appears to be very close to *M. integer*, but the yellow spot is much more separated from the suture, and there are four punctures on each wing-case. We have only received one example; and I do not know which sex it represents. The terminal joint of the antennæ is similar in shape to that of *M. integer*, but it is much smaller; on the other hand it is much larger than in the female sex of *M. cruciger* and its allies.

10. **Megalops elegans.** (Tab. XVII. fig. 20.)

Niger, nitidus, elytris abdomineque testaceo-variegatis; antennis pedibusque flavis; prothorace elytrisque inæqualibus, his multipunctatis.
Long. 5 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ short. Head with very numerous punctures on the space between the eyes. Thorax without grooves, but with very many punctures, and with smooth, shining, elevated spaces. Elytra short and very broad, testaceous, marked with black about the scutellum and at the four angles, with an elevated space near the suture towards the base, and with numerous coarse punctures placed in two series, and a large external patch. Hind body with pallid marks on the penultimate segment and on the margins of the other segments.

A single female.

11. **Megalops præditus.** (Tab. XVII. fig. 21.)

Niger, nitidus, elytro singulo macula externa rufo-testacea; antennis pedibusque flavis, illis extrorsum fuscis; oculis majoribus; prothorace transversim sulcato; elytro singulo striola curvata impressa.
Long. $4\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui between 2500 and 6000 feet (*Champion*).

Head with very large eyes, moderately numerously punctate. Thorax with three broad and deep furrows bearing punctures, and the base in front of the hind margin depressed, the two furrows near the disc interrupted for a short space only; there are no punctures except in the grooves. Elytra broad, shining, each with a deep, impressed, curved striola behind the shoulders. Legs elongate.

Two examples; they have the terminal joint of the antenna small, and are probably females.

This is a very distinct species, resembling in its large eyes, long legs, and the striolæ on the wing-cases the species of the next group, from which, however, it remains quite distinct by the structure of the tarsi.

12. **Megalops guatemalenus.** (Tab. XVII. fig. 22.)

Brevis, nigerrimus, nitidus; antennis rufis, pedibus flavis; capite prothoraceque parce punctatis, hoc latiusculo, parum profunde sulcato; elytris seriebus duabus abbreviatis punctorum impressis.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ very short. Head with moderately large eyes, the discoidal space bearing a few definite punctures. Thorax with the two anterior grooves very shallow, the post-median one very broadly interrupted in the middle but deep at the sides; the grooves bear definite though not very large punctures, and there are also a few impressions on each side connecting the post-median groove with the basal punctures.

Our two examples are no doubt females.

13. **Megalops panamensis.**

Nigerrimus, nitidus; antennis rufis, pedibus flavis; capite prothoraceque punctatis, hoc profunde sulcato; elytris seriebus duabus punctorum impressis.
Long. $3\frac{3}{4}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Although very similar to *M. guatemalenus*, this insect is quite distinct, the head having numerous coarse punctures on the upper portion, and the grooves on the thorax being very deep though rendered irregular by large punctures. The single example is no doubt a female, and has the terminal joint of the antennæ considerably larger than in the same sex of *M. guatemalenus*.

14. **Megalops politus.**

Nigerrimus, nitidus; antennis rufis, pedibus flavis; capite prothoraceque parce punctatis, hoc obsolete sulcato elytris seriebus duabus abbreviatis punctorum impressis.
Long. $3\frac{3}{4}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Head with only three or four punctures on the discoidal area. Thorax elongate and rather slender; the two anterior grooves very shallow, the post-median one very widely interrupted. Elytra with from four to six punctures in each series.

In this species the punctures are distinctly obliterated from the basal margin of the thorax, or rather the few punctures that exist are placed not quite close to the margin. The lateral portions of the hind body bear a distinct pubescence. The unique exponent is a male; it is remarkable on account of the extreme elongation of the last joint of the antennæ, this joint, moreover, being densely pubescent.

15. **Megalops vulneratus.**

Nigerrimus, nitidus; antennis pedibusque flavis; capite prothoraceque numerose punctatis, hoc parum profunde sulcato; elytris seriebus duabus punctorum abbreviatis punctisque nonnullis externis adjectis; oculis haud magnis.

Long. $3\frac{1}{2}$ millim.

Hab. Panama, Caldera in Chiriqui 1200 feet (*Champion*).

Head with numerous punctures, which are not so coarse as in most of the other species of the genus. Thorax with the anterior channel almost obsolete and not parallel with the anterior margin, its situation rendered very definite by the numerous rather fine punctures; the second groove more distinct, and likewise very definitely punctate, and on the middle angulate behind; just behind the middle on each side is a punctate depression, and the disc is occupied by an angular elevation. The punctures of the elytral series are large and definite, and there are seven or eight on the outer, and five on the inner series; the punctures on the outside are placed in an irregular manner, and are five or six in number.

This species has smaller eyes than any other *Megalops*, except the aberrant *M. peploides*; it will be identified by this character and by the punctures on the thorax being less coarse than usual. The unique example is in very bad condition; it is a male and has the terminal joint of the antennæ large, suboblong, with gently rounded apex.

16. **Megalops obscurus.**

Nigro-piceus, nitidus; capite prothoraceque nigris, elytrorum basi dilutiore, antennis pedibusque flavis; capite prothoraceque sat numerose punctatis, hoc obsolete sulcato; elytris seriebus duabus abbreviatis punctorum.

Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, San Isidro 1500 feet (*Champion*).

Apparently closely allied to *M. guatemalenus*, but I think distinct: independently of the more dilute colour (which is perhaps in part due to immaturity) *M. obscurus* is rather more slender, and has considerably smaller eyes, and the thoracic sulci are a little deeper and more definitely punctate. The unique example is a female; its antennæ are nearly similar to those of *M. guatemalenus*.

17. **Megalops basalis.** (Tab. XVII. fig. 23.)

Piceo-rufus, nitidus; capite superne, pronoto elytrisque ex parte majore nigricantibus, his basi abdomineque apice rufis, antennis pedibusque flavis, abdominis lateribus rufo-variegatis; capite prothoraceque crebrius fortiter punctatis, hoc inæquali, haud sulcato; elytris seriebus punctorum duabus abbreviatis.

Long. $3\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ short. Head with numerous large punctures; eyes only moderately large. Thorax with the grooves effaced, but their position still indicated, the punctuation on the other hand greatly developed. Elytra broadly red at the base. Hind body piceous

or black in the middle, the margins in great part, and the apex, red. Under surface piceous-red, with the breast red. Male with the terminal joint of the antennæ broad and not acuminate and considerably larger than in the female.

Two examples.

18. **Megalops porcatus.**

Nigro-subæneus, nitidissimus; antennis pedibusque flavis, femoribus sordidis; capite prothoraceque numerose punctatis, hoc haud sulcato; elytris seriebus duabus punctorum, punctis nonnullis ad suturam et ad marginem lateralem adjectis.
Long. $3\frac{1}{4}$ millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

The antennæ are short, the eyes small. The head and thorax covered with large punctures; on the latter there are, however, some small, irregular, shining spaces. There are six small distinct foveæ at the base of each segment of the hind body.

Of this distinct little insect we have received but one example; its sex is uncertain, the terminal joint of the antennæ being of moderate size.

19. **Megalops peploides.** (Tab. XVII. fig. 24.)

Brevis, nigro-piceus, minus nitidus; prothorace omnino densissime, grosse punctato; elytris sulcatis.
Long. $2\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Independently of its extraordinary sculpture, this little insect could be recognized by its comparatively small eyes and short legs. The antennæ are very short; the terminal joint sub-globular, the preceding one very strongly transverse. The head is small, its width, including the eyes, being much less than that of the elytra; the sides of the front are greatly elevated over the insertion of the antennæ, and the intervening space bears some coarse punctures. The thorax is broad and rather short, denticulate at the sides, with coarse punctures so crowded that they are in part confluent. The elytra are broad and short, and each bears four or five deep, though irregular, punctate longitudinal grooves. The six foveæ on the basal segment of the hind body are rather large, those on the following segments smaller. Unique.

§ 2. *Tarsi with the fourth joint prolonged as a lobe or style beneath the terminal joint.*

20. **Megalops incultus.**

Nigerrimus, nitidus; pedibus antennisque flavis, his extrorsum fuscis; prothorace punctato-sulcato, præterea vix punctato; elytris striola curvata impressa.
Long. $3\frac{3}{4}$ millim.

Hab. Mexico, Teapa (*Sallé*); Panama, Bugaba (*Champion*).

Head with a few punctures only between the eyes, these latter large. Thorax with

a punctate groove close to the front margin, and behind this another groove extending completely across; behind the middle is a third groove, interrupted on the disc; the base depressed and punctate in front of the hind margin.

This insect is closely allied to the Amazonian *M. spinosus*, but smaller, with smaller eyes, a less uneven surface of the head, and the grooves of the thorax not so wide though more distinctly punctured. Erichson's *M. cephalotes* is probably another allied species, although in his figure the tarsi are represented with a different structure. We have received only one example from each locality; the one from Mexico differs a little from the Panama type.

21. **Megalops puncticeps.** (Tab. XVII. fig. 25.)

Nigerrimus, nitidus; pedibus antennisque flavis, his extrorsum fuscis; capite numerose punctato; prothorace punctato-sulcato; elytris striola curvata impressa.

Long. 3½ millim.

Hab. GUATEMALA, near the city (*Champion*).

Though closely allied to *M. incultus* and *M. spinosus*, this insect is readily distinguished by the surface of the head being less uneven, but covered with numerous, large, definite punctures; the punctures in the thoracic grooves are also much more conspicuous. The sex of the unique example is uncertain; it is probably a female.

22. **Megalops impressus.**

Megalops impressus, Sharp, Trans. Ent. Soc. Lond. 1876, p. 380[1].

Hab. PANAMA, Tolé (*Champion*).—SOUTH AMERICA, Amazons valley[1].

Our single example, though not perfectly agreeing with the unique Amazonian type, is not sufficiently different to warrant its separation. From *M. puncticeps*, to which it is closely allied, it differs by the rather smaller eyes, which are separated by a larger space, and by this space being rather more uneven and less definitely punctured; the thorax is broader, its grooves less distinct, its punctuation more developed.

Subfam. *OXYPORINÆ*.

OXYPORUS.

Oxyporus, Fabricius, Ent. Syst. p. 267 (1792); Erichson, Gen. et Spec. Staph. p. 555; Leconte, Tr. Am. Ent. Soc. vi. p. 214.

This genus comprises about twenty-four species, distributed in North America, Europe, Siberia, and Japan. The occurrence of two species, though both peculiar to it, in our region, is one of the more important of the facts that prove some considerable resemblance between the Mexican and North-American faunæ.

1. **Oxyporus mexicanus.** (Tab. XVIII. fig. 1.)

Oxyporus mexicanus, Fauvel, Bull. Soc. Normand. x. p. 21[1].

Hab. Mexico, Oaxaca (*Sallé* [1]), Juquila (*Sallé*, *Höge*).

2. **Oxyporus flohri.** (Tab. XVIII. fig. 2.)

Testaceus; mandibulis fasciisque duabus, una ad elytrorum apicem, altera ante abdominis apicem, nigris; capite infra pectoreque fuscis.
Long. 10 millim.

Hab. Mexico, Alto del Tizar (*Flohr*).

Antennæ entirely yellow. Thorax small, not so long as broad, rounded at the sides. Elytra with two irregular discoidal series of punctures, the black band broader at the outer angle.

I am indebted to Mr. Flohr for two examples of this distinct species; both are rather immature.

Subfam. *OXYTELINÆ.*

For the purposes of this work, this subfamily will comprise, not only Erichson's tribe 'Oxytelini,' but also his 'Piestini,' 'Phlœocharini,' and 'Proteinini,' as I find it quite impossible to distinguish these smaller tribes, now that we are acquainted with a much greater number of forms than were known to Erichson fifty years ago. There is in this division of the Staphylinidæ great variety in the form of the anterior coxæ and the pieces of the prothorax adjacent to them, but the modifications are so gradual that it would be very difficult to use them for taxonomical purposes; it will probably be found more advantageous to make use of the structure of the front of the head and the number of joints in the tarsi as the means of classification.

Group **OSORIINA.**

OSORIUS.

Osorius, Latreille, Règn. Anim. iv. p. 438 (1829); Erichson, Gen. et Spec. Staph. p. 753; Leconte, Tr. Am. Ent. Soc. vi. p. 215.

This genus comprises about thirty species, and is widely distributed in the warm and temperate regions of the Old and New Worlds, though not found in Europe. America north of Mexico has two or three species, but the greater number of those known to me inhabit South America.

These insects are said to live in decaying wood. Mr. Champion found the greater part of his specimens living in sand on the banks of streams after the manner of *Bledius*, one or two were, however, found by him in very wet rotten wood; he also frequently captured examples on the wing. *Osorius* would appear to take the place of *Bledius* in Tropical America, the latter being represented only by a small number of inconspicuous species in this region.

§ 1. *Lateral margins of the thorax more strongly elevated near the base.*

1. **Osorius canaliculatus.** (Tab. XVIII. fig. 3.)

Osorius canaliculatus, Solsky, Bull. Mosc. xlii. pt. 2, p. 265 (1869) [1].

Hab. Mexico (*Boucard* [1]), Orizaba (*coll. Chevrolat*), Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Chiacam, Tactic, Senahu, Sinanja (*Champion*); Panama, Bugaba (*Champion*).

Of this insect we have obtained single examples from most of the above sources, and though I can find no good characters to distinguish more than one species among them, it is quite possible there may prove to be such. Our figure represents an example from Sinanja.

2. **Osorius puncticeps.**

Angustulus, cylindricus, niger, nitidus; antennis pedibusque piceis; capite crebrius minus subtiliter punctato; prothorace basin versus fortiter angustato, sat crebre subtiliter punctato, medio canaliculato; elytris parce punctatis.

Long. 12 millim.

Hab. Mexico (*Truqui*, *Flohr*), Orizaba (*coll. Chevrolat*), Jalapa, Cerro de Plumas (*Höge*), Tuxtla (*Sallé*), Cordova (*Sallé*, *Höge*).

Mandibles rather long and slender, the teeth quite minute. Thorax just about as long as it is broad at the base, strongly narrowed behind, the lateral margins much raised on the posterior part; hind angles definite, rectangular. Elytra slightly longer than the thorax, with distant, but distinct, punctures. Hind body with a very few punctures on the upper surface; on the under surface the penultimate and terminal segments are rather sparingly punctate.

Readily distinguished from *O. canaliculatus* by the conspicuous punctuation of the head, and by the terminal ventral plate not possessing coarse deep longitudinal rugæ. Some examples have a rather dense punctuation on the terminal ventral segments, due, I consider at present, to variation, or possibly it may be a sexual character. Most of the examples, except for the above characters, agree satisfactorily, but there are one or two showing other slight differences that may possibly be indicative of another species.

3. **Osorius vicinus.**

Cylindricus, niger, nitidus; antennis pedibusque piceis; capite fortiter punctato; prothorace transverso, crebre punctato; elytris parce punctatis; mandibulis argute dentatis.

Long. 11 millim.

Hab. Panama, Bugaba, Volcan de Chiriqui 2000 to 4000 feet, Caldera (*Champion*).

Extremely similar to *O. puncticeps*, but readily distinguished by the well-defined teeth of the mandibles; the thorax also is broader and less narrowed behind, and has a short channel on the disc. The clypeus is feebly bisinuate, its angles obtuse. The

lateral margins of the thorax are rather strongly elevated behind; the hind angles nearly rectang ular, very slightly obtuse. The two apical ventral segments bear a few coarse punctures.

The series of about fifteen examples shows but little variation.

4. **Osorius dubius.**

Cylindricus, niger, nitidus; antennis pedibusque rufo-piceis; sublævigatus, capite parce subobsolete punctato; clypeo in medio tantum obsolete bisinuato.
Long. 10 millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

The mandibles are rather long, the left one with a very small tooth-like tubercle on the middle. The eyes are scarcely convex. The thorax has the lateral margin strongly elevated behind; there is a short obsolete channel on the disc, and the punctuation is scarcely visible. The elytra are almost destitute of punctuation, and are only feebly coriaceous. The hind body above is quite impunctate, and beneath the terminal and penultimate segments rather sparingly punctate. Two examples.

This and the following species bring the two groups into which I have divided the genus very close together.

5. **Osorius lævigatus.**

Cylindricus, niger, nitidus; antennis pedibusque piceis; sublævigatus, capite parce punctato; clypeo late emarginato.
Long. 10 millim.

Hab. Guatemala, Sinanja and Sabo in Vera Paz (*Champion*).

Extremely similar to *O. dubius*, but the clypeus cannot be said to be bisinuate in front; the punctuation of the head is not quite so effaced, and there is no channel on the disc of the thorax. The elytra are smooth and shining, and there is a moderately close punctuation on the last two ventral segments; the terminal segments are more or less dilute in colour so as to be piceous or rufescent. The mandibles are a little longer than in *O. dubius*, and the left one is bisinuate rather than toothed on the inner margin. Three examples.

6. **Osorius boops.**

Cylindricus, niger, vel piceus, sat nitidus; antennis pedibusque rufis; capite fere lævigato, subopaco; oculis fortius convexis.
Long. 8 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

This is another species with extremely little sculpture, and readily distinguished by the more convex eyes. The front margin of the clypeus is broad and rather peculiarly formed—the angles being not at all prominent, and the front margin straight or feebly emarginate near each angle, and then slightly emarginate in the middle. The head has a silky opacity, and some extremely fine and obsolete punctures. The thorax is rather broad, but little narrowed posteriorly, the lateral margins behind rather

broadly explanate-elevate. The terminal ventral rings are almost without sculpture. Two decayed examples.

7. Osorius opacifrons.

Cylindricus, nigricans, minus nitidus; antennis pedibusque rufis; sublævigatus, capite peropaco.
Long. 8 millim.

Hab. Mexico (*Chasles, in coll. Chevrolat*).

This insect is extremely similar to *O. boops*, but has the eyes less convex, and also exhibits some other distinctions. The front of the clypeus is broad, simply emarginate. The eyes are slightly convex. The surface of the head is remarkably dull, and punctures can scarcely be detected on it. The thorax is broad, a little sinuate at the sides behind, where the lateral margins are slightly, but distinctly, elevated, the angles rectangular; it is very finely and sparingly punctate, and there is a very obsolete channel along the middle. The elytra are almost impunctate, and the terminal ventral segments without sculpture. Unique.

§ 2. *Lateral margins of the thorax not more elevated behind; thorax not canaliculate, but with a median smooth space, which is usually limited on each side by serial punctures.*

8. Osorius cylindricus.

Osorius cylindricus, Latr. Nouv. Ann. Mus. Hist. Nat. i. p. 86 [1]; Er. Gen. et Spec. Staph. p. 756 [2].

Hab. Mexico [1], Orizaba (*Deppe* [2]), Jalapa (*Flohr*, *Höge*), Cordova (*Sallé*).

9. Osorius germanus.

Sat latus, nigricans, nitidus; antennis pedibusque rufis; capite, prothorace elytrisque parce subtiliterque punctatis, hoc medio anguste longitudinaliter lævigato.
Long. 7 millim.

Hab. Guatemala, near the city, Capetillo, Dueñas (*Champion*).

This insect is extremely close to *O. cylindricus*, but is broader than the broadest and largest examples of that species, and readily distinguished by the much finer punctuation of the thorax. From the following species it may be known by the fact that, though there is an indefinite smooth space along the middle of the thorax, this space is not bounded by any serial punctures. The punctuation of the ventral plates of the last two segments is less than in *O. cylindricus*. Sixteen examples.

10. Osorius parcus.

Cylindricus, nigricans, nitidus; antennis pedibusque rufis; capite dense subtiliterque coriaceo, opaco, parcius subtiliter punctato; prothorace parce punctato, medio area lata lævigata.
Long. 7 millim.

Hab. Mexico, Cordova (*Höge*); Guatemala, Panzos, Cubilguitz, and San Juan in Vera

Paz (*Champion*); Honduras (*Sallé*); Costa Rica, Irazu 7000 feet (*Rogers*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species has a dull head, with scanty sculpture. The thorax is rather short, not so long as broad, the sides curvate and much narrowed behind, the hind angles very obtuse; the surface with distant, coarse punctures, which are altogether absent from a short space along the middle. The elytra are rather longer than the thorax, and have a scanty subobsolete punctuation.

Mr. Champion found a large series of this species at Panzos, and these examples exhibit very little variation; from the other localities we have received only a small number of specimens. The two examples from Honduras have the elytra piceous-red, and may possibly be distinct.

11. **Osorius crassus.**

Latior, cylindricus, niger, sat nitidus; antennis pedibusque rufis; capite dense coriaceo, opaco, parce punctato; prothorace parce punctato, medio area lata lævigata, angulis posterioribus sat obtusis; elytris parce punctatis, subopacis.

Long. 8–9 millim.

Hab. Mexico, Cordova (*Höge*); Guatemala, San Gerónimo (*Champion*).

Compared with *O. parcus* this species is larger and much broader, and has considerably more elongate mandibles, and the hind angles of the thorax are less obtuse and not so depressed. In other respects the two insects are very similar. Three examples.

12. **Osorius mundus.** (Tab. XVIII. fig. 4.)

Osorius mundus, Sharp, Tr. Ent. Soc. Lond. 1876, p. 432[1].

Hab. Mexico (*Flohr*[1]), Guanajuato (*Sallé*), Cuantla (*Flohr*), Jalapa, Cordova, Cerro de Plumas (*Höge*).

Although very closely allied to *O. parcus*, I have no doubt about this species being distinct. It is a narrower insect, and usually has red elytra and a coarser punctuation; and, moreover, may always be distinguished by the narrower and differently sculptured head (the surface being less coriaceous, and therefore less dull, while the punctuation is closer and rougher, being more tuberculate, and nearly absent from a rather narrow indefinite space along the middle); by the mandibles being shorter, and the angles of the clypeus quite blunt. The anterior tibiæ are extremely broad.

13. **Osorius debilis.**

Angustulus, cylindricus, rufescens, nitidulus; capite, elytris apicem versus abdomineque plus minusve picescentibus; parce punctatus, prothorace angulis posterioribus minus obtusis; mandibulis argute sat longe dentatis.

Long. 5 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Head shining, rather closely punctate. Thorax as long as broad, a little narrowed behind, the hind angles not very obtuse; with but few, only moderately coarse punctures; the median smooth space broad, definite, and parallel. Elytra rather longer than the thorax, sparingly punctate.

We have received eight examples of this species. The comparatively large development of the mandibular tooth—that on the right mandible being particularly large and prominent—distinguishes *O. debilis* satisfactorily from its allies, independent of the minor characters.

14. **Osorius salvini.**

Angustus, cylindricus, piceus; elytris rufis, antennis pedibusque testaceis; capite prothoraceque fortiter punctatis; mandibulis brevibus argute dentatis.
Long. 4 millim.

Hab. GUATEMALA, near the city 5000 feet (*Salvin*), San Gerónimo (*Champion*).

Head shining, its sculpture subtuberculate and moderately close. Thorax strongly narrowed behind, very coarsely punctured, with a very definite space along the middle impunctate. Elytra rather obsoletely punctured.

In this species the short setæ on the surface are more distinct than in the allied forms; the hind body is densely punctured, and its setæ very evident. Mr. Champion met with a good many specimens, but they are mostly in a very bad state of preservation; the colour is variable, perhaps as the result of decay. The North-American *O. latipes* is closely allied to this insect, but is twice the size, and has more densely punctured elytra.

15. **Osorius micros.**

Angustior, cylindricus, piceus vel rufescens; antennis pedibusque testaceis; capite prothoraceque fortiter punctatis.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Pantaleon (*Champion*); HONDURAS (*Sallé*); PANAMA, San Feliz (*Champion*).

This is the smallest, narrowest, and most parallel of all the *Osorii*. It has the thorax but little narrowed behind, and its lateral margins excessively fine; in other respects similar to *O. salvini*.

We have received only four examples of this species; the one from Honduras was labelled "*O. micros*, Fauvel" in Sallé's collection.

HOLOTROCHUS.

Holotrochus, Erichson, Gen. et Spec. Staph. p. 757 (1840); Leconte, Tr. Am. Ent. Soc. vi. p. 216.

This genus has a considerable number (twenty or so mostly undescribed) of species in South America, two in the Antilles, and one each in Java and Madagascar. They appear to be rare insects and solitary in their habits. According to Mr. Champion they are usually found beneath wet sappy bark.

1. **Holotrochus rufopygus.** (Tab. XVIII. fig. 5.)

Subcylindricus, nitidissimus, niger; abdominis segmentis duobus ultimis rufis; antennis pedibusque piceis; prothorace parce subtilissimeque punctulato, utrinque prope angulum posteriorem longius impresso; elytris vage subtiliter punctatis.
Long. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, Purula 4000 feet (*Champion*).

Antennæ rather short; joints 4–6 each about as long as broad, 7–10 slightly transverse, the terminal joint obtuse and rather longer. Head very feebly and sparingly punctured. Thorax transversely subquadrate, straight at the sides, the hind angles a little rounded; near each side is a rather large impression extending more than one third of its length. Elytra longer than the thorax, the shoulders sharply defined and a little prominent; with a deep sutural stria and very obsolete punctuation. Terminal ventral segments feebly punctulate, dull; an elongate deep depression on the middle of the last segment, and a slight impression with four minute tubercles on the penultimate one in the male.

One pair.

2. **Holotrochus simplex.**

Nitidissimus, niger; antennis pedibusque rufis; subtilissime punctulatus; prothorace fere inimpresso.
Long. 6 millim.

Hab. GUATEMALA, Las Mercedes 2500 feet (*Champion*).

In this species there is only a feeble impression, bearing three or four rather larger punctures, on each side of the thorax, and the terminal segments of the hind body are not red; in other respects the unique female greatly resembles the same sex of *H. rufopygus*.

3. **Holotrochus picescens.**

Subcylindricus, nitidissimus, nigro-piceus; antennis pedibusque rufis; subtilius punctatus; prothorace fere inimpresso.
Long. vix 5 millim.

Hab. GUATEMALA, Rio Naranjo 450 feet (*Champion*).

Closely allied to the two preceding species, but the thorax is without conspicuous depression, and the surface is a little less obsoletely though more closely punctate; such depression as there is on the thorax is very vague and small, though replaced by a more conspicuous one at the extreme base of the wing-case. The male has an elongate, deep, elliptical impression, with a slightly incrassate margin, on the middle of the last ventral plate. Unique.

4. **Holotrochus politus.**

Subcylindricus, nigro-piceus, nitidissimus; antennis pedibusque rufis; fere impunctatus; elytris prothoracis longitudine.
Long. $4\frac{1}{2}$ millim.

Hab. MEXICO (*Truqui, in coll. Sharp*).

Above blackish, with the margin of the clypeus, the base of the thorax, and the hind margins of the rings of the hind body reddish, the elytra piceous; beneath piceous. Thorax straight at the sides, not quite so long as broad, the hind angles rectangular; without fovea, and the punctuation very distant and excessively fine. The elytra are only about as long as the thorax, and almost impunctate. Hind body very shining, almost impunctate, both above and below. Unique.

5. **Holotrochus centralis.**

Subcylindricus, nigerrimus, nitidus; parcius subtilissime punctulatus; antennis pedibusque rufis; elytris obsolete substrigosulis; abdomine segmento ultimo ventrale granulato.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*).

The thorax is about as long as broad, straight at the sides; without impression, sparingly, extremely finely punctate. Elytra without punctuation, very indistinctly strigulose. The two terminal abdominal segments punctate; the last ventral segment distinctly granulate. Three examples.

This insect is no doubt closely allied to *H. cylindrus*, Er.

6. **Holotrochus uniformis.**

Subcylindricus, nigerrimus, nitidissimus; omnino tenuissime punctulatus, fere glaber; antennis pedibusque rufis.
Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

Joints 4–6 of the antennæ small, 7–10 each strongly transverse. Thorax nearly as long as broad, very convex transversely, without foveæ. Elytra a little longer than the thorax, polished and shining. Hind body without sculpture; hind margin of the penultimate segment and the armature red; terminal segment reddish beneath, without sculpture. Unique.

7. **Holotrochus marginatus.** (Tab. XVIII. fig. 6.)

Minus cylindricus, nigerrimus, nitidissimus; parcius subtilissime punctulatus; antennis, pedibus anoque rufis; prothorace transverso, basi subtiliter marginato.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

This species is easily distinguished from the preceding by the shorter thorax, and by this part possessing a distinct basal margin. The thorax is much broader than long, almost impunctate, without impressions, slightly curvate at the sides, the hind angles rounded. Elytra rather longer than the thorax, shining, almost impunctate. Terminal segments of the hind body almost destitute of sculpture, shining both above and below.

Two examples.

Group **OXYTELINA.**

BLEDIUS.

Bledius, Mannerheim, Brach. p. 44 (1830); Erichson, Gen. et Spec. Staph. p. 760; Leconte, Tr. Am. Ent. Soc. vi. p. 217.

This extensive genus contains at present about 150 species. Its metropolis apparently is North America, where there are about fifty described species. South America on the contrary is very poor in *Bledius*; it possesses only seven or eight described species, all of which are minute inconspicuous forms. In the eastern hemisphere the genus is generally distributed, except in islands.

1. **Bledius lecontei.** (Tab. XVIII. fig. 7.)

Testaceus, opacus; capite elytrorumque disco plus minusve infuscatis; mandibulis elongatis, medio longius dentatis; prothorace elytrisque dense subobsoleteque punctatis.
Long. 7–9 millim.

Hab. Mexico, Tres Marias Islands (*Forrer*).

We have received only two badly preserved specimens of this insect; these differ considerably in size and colour, but are, I have no doubt, one species. *B. lecontei* is closely allied to *B. jacobinus*, Lec., but with a denser punctuation on the head, thorax, and elytra; this punctuation is more obsolete than in *B. jacobinus*, and the disc of the elytra is peculiarly dull. The depression on the submentum is deep in the middle behind, and the suture behind it is nearly straight.

2. **Bledius inornatus.** (Tab. XVIII. fig. 8.)

Rufescens, sat nitidus; capite superne abdomineque nigricantibus; prothorace elongato, fortiter punctato; mandibulis sat elongatis, curvatis, ante apicem breviter dentatis.
Long. 6 millim.

Hab. Costa Rica, Irazu 6000 to 7000 feet (*Rogers*); Panama, Bugaba (*Champion*).

Head dull, impunctate, unarmed; eyes very convex. Thorax shining, reddish, somewhat infuscate along the middle, nearly as long as broad; sides curvate, gently narrowed behind, the hind angles extremely indistinct; surface rather closely and coarsely punctured, more sparingly so along the middle, the dorsal channel very deep and distinct. Elytra rather longer than the thorax, shining red, coarsely and closely punctured.

This *Bledius* is allied to the European *B. fracticornis*. Three examples only were obtained, two from Irazu and one from Bugaba; they agree closely.

3. **Bledius gregarius.**

Parvus, niger, sat nitidus; prothorace piceo; antennis, pedibus elytrisque testaceis, his disco plus minusve infuscatis; mandibulis brevibus, simplicibus.
Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Dueñas (*Champion*).

Antennæ with the terminal joint nearly twice as long as the tenth. Head shining, impunctate; eyes rather small. Thorax rather strongly transverse, curvate, not angulate at the sides; hind angles obtuse, indistinct; surface rather closely and coarsely punctured, with a very fine channel extending all along the middle. Elytra much longer than the thorax, closely and rather finely punctate. Hind body almost impunctate.

Mr. Champion procured a large number of specimens of this obscure little *Bledius*, all of which were captured on the wing towards sunset, and near the banks of a small stream. The species is allied to the Amazonian *B. simplex*, but has much longer elytra.

4. **Bledius bifasciatus.**

Minutus, subopacus, minutissime punctatus, piceus; capite nigricante, mandibulis, antennis, pedibus elytrisque testaceis, his basi apiceque transversim nigris; capite supra antennas utrinque tuberculo acuto; mandibulis elongatis, tenuibus, curvatis.
Long. 2 millim.

Hab. GUATEMALA, Rio Naranjo 450 feet, Pantaleon (*Champion*).

Head very broad, dull, without visible punctuation. Thorax rather shining, almost impunctate, with traces of an obliterated channel along the middle; the sides are almost straight nearly to the base, where they become greatly narrowed. Elytra obsoletely punctate.

This minute but elegant *Bledius* is not closely allied to any species known to me. Seven examples were obtained.

5. **Bledius infantilis.**

Minutus, rufescens; capite fusco, antennis pedibusque flavis, elytris testaceis; prothorace sat transverso, parce punctato, disco obsolete canaliculato; elytris dense subtiliterque punctatis.
Long. 2 millim.

Hab. MEXICO, Presidio (*Forrer*).

Head impunctate; eyes large, very convex; mandibles very short. Thorax dark red, rather shining; subobsoletely and sparingly, but not finely, punctured; sides straight nearly to the base, then gently rounded so that the hind angles cannot be detected. Elytra longer than the thorax, each very rounded at the apex. Seven examples.

Closely allied to *B. gregarius*, but still smaller and readily distinguished by the much larger eyes. It is almost equally close to *B. muticus*, from the Amazons valley, but that species has a shorter thorax, with the dorsal channel still more obliterated

PLATYSTETHUS.

Platystethus, Mannerheim, Brach. p. 46 (1830).
Platysthetus, Erichson, Gen. et Spec. Staph. p. 781.

This genus is at present best represented in the north temperate regions of the Old World, but it is probably widely distributed; the species are minute unattractive

insects, living in very muddy places, and are not likely to be captured by casual collectors. About thirty species are known, including one from North America, and one from South America; both these latter have been met with in our region.

1. **Platystethus americanus.**

Platysthetus americanus, Er. Gen. et Spec. Staph. p. 784 [1].

Hab. North America, Pennsylvania and Virginia [1].—Mexico, Guanajuato (*Sallé*).

We have received only one female, but I have no doubt about its determination.

2. **Platystethus obscurus.**

Niger, nitidus; elytris piceis, pedibus testaceis; capite prothoraceque parce obsoleteque punctatis, hoc canaliculato, illo vertice utrinque impresso.
Long. 2 millim.

Hab. Mexico, Guanajuato (*Sallé*).

Of this obscure little insect we have only received females. *P. obscurus* appears to be about equally allied to *P. americanus* and *P. spiculus*, from the former of which it is distinguished by the existence of a short deep depression on either side of the vertex (this depression is a little curvate and longitudinal in its direction, and being placed at a little distance from the eye gives rise to an appearance of a slight elevation between it and the eye), and another close to the inner margin of the eye; in *P. spiculus* there is a third stria between the two just mentioned, and punctuation can hardly be detected on the surface.

3. **Platystethus spiculus.** (Tab. XVIII. fig. 9.)

Platysthetus spiculus, Er. Gen. et Spec. Staph. p. 784 [1].

Hab. Guatemala, San Gerónimo, Quezaltenango 7800 feet (*Champion*); Panama, Bugaba, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).—Venezuela, Caracas [1].

OXYTELUS.

Oxytelus, Gravenhorst, Micr. p. 101 (1802); Erichson, Gen. et Spec. Staph. p. 785; Leconte, Tr. Am. Ent. Soc. vi. p. 234.

The unattractive insects of which this genus is composed are mostly of stercoraceous habits, and are but rarely secured by collectors in tropical countries. Notwithstanding this fact, more than one hundred species have been described, so there is no doubt that the members of this genus are very numerous. It is of almost universal distribution, and occurs from the Arctic regions to the equator; in the southern hemisphere few species have yet been obtained, except in Australia.

§ 1. *Thorax without, or with only a very slight, impression near the lateral margin.*

1. **Oxytelus principalis.** (Tab. XVIII. fig. 10, ♂.)

Latiusculus, subdepressus, nitidus, nigerrimus; elytris apicem versus livide testaceis; prothorace medio late, vage impresso; elytris parce subtiliterque punctatis.

Mas mandibulis longioribus, valde curvatis; clypeo medio processu lato subtriangulari, utrinque subdentato.

Fœm. clypeo medio quinque-dentato, dentibus lateralibus obtusis, parum prominulis.

Long. 8–10 millim.

Hab. Guatemala, Quezaltenango 7800 feet (*Champion*).

Antennæ entirely black. Head shining, feebly punctulate, the punctuation more developed on the middle of the vertex, where the surface is broadly vaguely depressed; eyes remote from the hind angles. Thorax twice as broad as long, feebly punctate, with a broad depression along the middle (deep in front, more shallow behind), and also vaguely depressed near the sides; lateral margin excessively fine. Elytra broad and short, a little longer than the thorax; the basal portion black, shading into livid testaceous, the black colour continued to the apex along the suture. Legs black; tarsi very long and slender, infuscate-testaceous. In the male the middle tooth of the clypeus becomes enlarged, and the intermediate tooth placed on its side becomes more or less obsolete; the terminal ventral plate has a short truncate, produced lobe in the middle, and on the hind margin of the preceding segment there are two slight, rather widely separated, tuberculiform projections. In the female the terminal ventral plate is obtusely angular in the middle.

A series of nine examples was procured of this remarkable species; like so many of its congeners, it is of stercoraceous habits.

2. **Oxytelus luteipennis.**

Oxytelus luteipennis, Er. Käf. Mark-Brand. i. p. 593[1]; Gen. et Spec. Staph. p. 592[2].

Oxytelus fuscipennis, Mann. Bull. Mosc. 1843, ii. p. 233[3]; Solsky, Bull. Mosc. xlii. pt. 2, p. 265[4].

Oxytelus laqueatus, Gemm. & Har. Mun. Cat. ii. p. 649[5]; Fauv. Faun. Gall.-rhen. iii. p. 167[6].

Oxytelus mexicanus, Chevr. in litt. (coll. Sharp).

Hab. Europe[1 2 5 6].—North America, Sitka[3].—Mexico[4] (*Truqui*), Jalapa, Mirador (*Höge*), Cordova, Orizaba, Guanajuato (*Sallé*); Guatemala, Chiacam, San Gerónimo, San Joaquin, Rio Maria Linda, Zapote, Aceytuno (*Champion*).

Examples from Guatemala agree well with others from Sitka and Scotland in my collection, the Sitka examples being authentic exponents from Mannerheim. Leconte's *O. fuscipennis* (Tr. Am. Ent. Soc. vi. p. 235) is apparently quite different, unless his description of the male characters be erroneous. G. R. Waterhouse (Cat. Brit. Col. 1858) supposed this insect to be *Staphylinus laqueatus*, Marsham (Ent. Brit. p. 513), and this opinion has been accepted by the authors of the Munich 'Catalogue'[5] and by Fauvel[6]; but the terms of Marsham's description seem to me to render it certain

that he intended some other insect. In Mexico this appears to be the most abundant of the *Oxyteli*.

3. **Oxytelus insignitus.**

Oxytelus insignitus, Grav. Mon. p. 188[1]; Er. Gen. et Spec. Staph. p. 793[2]; Lec. Tr. Am. Ent. Soc. vi. p. 236[3].

Hab. NORTH AMERICA[1 2 3].—MEXICO, Guanajuato (*Sallé*), Mirador (*Höge*), Cordova (*Sallé*, *Höge*); GUATEMALA, near the city, San Gerónimo, San Joaquin, Sinanja, Cubilguitz (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui, Los Remedios (*Champion*).—SOUTH AMERICA, Colombia[2].—ANTILLES, St. Thomas[2].

4. **Oxytelus derasus.**

Politus, piceus; capite nigricante, antennarum basi, pedibus elytrisque testaceis, his ad angulos exteriores fuscescentibus; parce punctatus; prothorace polito, obsolete trisulcato, sulcis lateralibus abbreviatis, vix perspicuis; clypeo medio acuminato.
Long. 4 millim.

Hab. MEXICO, Vera Cruz, Jalapa, Cordova, Cerro de Plumas (*Höge*); GUATEMALA, San Gerónimo, Zapote, Champerico, Coatepeque, El Reposo (*Champion*); NICARAGUA, Granada (*Sallé*); PANAMA, David, Bugaba, Los Remedios (*Champion*).

Though allied to *O. luteipennis*, this insect is readily distinguished by the polished surface, with greatly diminished sculpture, and the obsolete thoracic grooves. The head is sparingly punctate, the front of the clypeus is rather depressed, and forms a minute projection in the middle. There is a fine obsolete groove along the middle of the thorax, and the lateral grooves can usually be detected, but they are abbreviated and very obsolete. The elytra are longer than the thorax, their sculpture much effaced, polished. The male has a larger head than the female, and the hind margin of the last ventral plate is prolonged in the middle to form a short, broad lobe. The species varies in colour from a piceous to a flavescent tint, and the sculpture is in some examples considerably less effaced than it is in others.

5. **Oxytelus lucidus.**

Politus, fere impunctatus, piceus; capite nigricante, mandibulis, antennarum basi elytrisque flavis; prothorace trisulcato, sulcis lateralibus postice abbreviatis.
Mas clypei medio breviter spinoso, spinæ apice emarginato.
Long. 3 millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ elongate, the penultimate joints slightly transverse, the terminal joint very long. Head polished, without sculpture, with a vague depression on the vertex on each

side, the middle of the clypeus with a small projection, which is emarginate at the tip. Thorax polished, impunctate; with a channel along the middle (deep and broad in front, finer behind), and on either side another one which is quite obliterated posteriorly. Elytra pallid, longer than the thorax, smooth and shining. The male has no peculiar abdominal characters. One example from each locality.

6. **Oxytelus carbonellus.**

Oxytelus carbonellus, Solsky, Bull. Mosc. xlii. pt. 2, p. 266 (1869) [1].

Hab. Mexico (*Boucard* [1]), Puebla, Guanajuato (*Sallé*).

7. **Oxytelus strigosulus.** (Tab. XVIII. fig. 12.)

Nigricans, pedibus rufis, opacus, dense minus subtiliter strigosulus; prothorace late obsolete trisulcato, lateribus minutissime, vix perspicue crenulatis.

Long. 3–3½ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, near the city, San Juan in Vera Paz, Cubilguitz, Senahu, Balheu (*Champion*).

Antennæ short, black, piceous at the base. Head with a feeble inequality of the surface. Thorax short, rounded at the base; emarginate in front, so that the anterior angles are rather prominent; with only very indistinct grooves, which are, indeed, scarcely present, but the spaces separating them are elevated, though abbreviated and indefinite. The elytra are longer than the thorax, blackish or picescent, very evidently strigose. Hind body closely and distinctly punctured. I have not been able to find any sexual distinction in our small series of examples.

8. **Oxytelus vilis.**

Niger, opacus; pedibus testaceis, femoribus fusco-testaceis; dense strigosus, haud punctatus, strigulis elytrorum minus subtilibus; prothorace obsolete trisulcato.

Long. 2–3 millim.

Hab. Mexico (*Truqui*); Guatemala, Quezaltenango 7800 feet, El Tumbador, Tamahu, San Joaquin, Cubilguitz (*Champion*).

Antennæ black, rather short; third and fourth joints very small, subequal, 5–10 each broader than the preceding one, transverse, the penultimate joints very strongly transverse. Head very densely and finely strigose, quite dull. Thorax sculptured like the head, the three median channels obliterated. Elytra a good deal longer than the thorax, densely and more coarsely strigose, more or less dilute in colour so as to be sometimes piceous instead of black. Hind body closely and finely punctured.

We have received a fair series of this obscure insect; it is probably an abundant species in our region. I can detect no conspicuous sexual differences, though, as some specimens have the head a good deal larger than others, I have no doubt that both sexes are before me.

9. **Oxytelus fragilis.**

Minutus, opacus, niger; pedibus testaceis; densissime subtilissime strigosulus; prothorace fere æquali.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador, San Joaquin, San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Extremely similar to the European *O. depressus*; resembling also the North-American *O. nanus*, Er., but readily distinguished by the absence of the slightly polished lines which mark the limits of the thoracic grooves in that species. The antennæ are entirely black; joints 3 and 4 very small, 5–10 transverse. Head very minutely strigose, quite dull, without depression on the vertex, the front margin of the clypeus feebly shining. Thorax strongly transverse, the grooves just perceptible and rather broad, the whole surface quite dull. Elytra longer than the thorax, and almost as finely strigose. Hind body very feebly, scarcely perceptibly, punctured.

The small series (nine examples) obtained of this obscure species does not exhibit, so far as I can see, any conspicuous sexual differences; but the specimens are in very decayed condition, so that I cannot examine them thoroughly.

10. **Oxytelus emeritus.**

Minutus, nigricans, omnino subtilissime strigosulus, subnitidus; pedibus testaceis; prothorace trisulcato.
Long. 2 millim.

Hab. GUATEMALA, San Joaquin, San Gerónimo (*Champion*).

Head shining, the clypeus polished, the vertex with a definite fovea in front. Thorax strigose; the grooves present, the spaces separating them polished and rather broad. Elytra longer than the thorax, dull, excessively minutely strigose.

Only two examples of this minute *Oxytelus* were obtained: I believe they represent the sexes though I see nothing very conspicuous to indicate it.

§ 2. *Thorax with a large and very deep impression on each side near the lateral margin.*

11. **Oxytelus spinifrons.** (Tab. XVIII. fig. 11, ♂.)

Niger; mandibulis, antennarum basi, pedibus elytrisque testaceis, his brevibus, strigoso-punctatis; prothorace profunde trisulcato.
Mas clypei medio triangulariter subspinoso-producto.
Long. $3\frac{1}{2}$–4 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ with the four basal joints yellow or red, the others dark; terminal joint elongate, acuminate. Head much larger in the male than in the female; vertex punctate-strigose, and with three depressions, these depressions as well as the sculpture much more largely developed in the male than in the female; the anterior

portion impunctate, and in the male polished, and produced as a triangular process, with decurved spinose apex. Thorax about twice as long as broad; the three dorsal grooves very deep, definite, and straight; the large lateral cavity surrounded by a small amount of strigose punctuation. Elytra but little longer than the thorax, rather coarsely strigose-punctate; at the outside there is an impressed line. The abdominal characters of the male are very slight indeed: the hind margin of the terminal ventral plate is feebly sinuate, and the preceding segment has some very fine punctuation on the middle.

This is one of a group of species the determination of which on a small number of specimens is very difficult; I supposed them, indeed, to be mere variations of one species, till I examined the male characters. The late Mr. Janson obtained many examples of this insect.

12. **Oxytelus armatifrons.**

Piceus; mandibulis, antennarum basi, pedibus elytrisque testaceis, his brevibus, strigoso-punctatis; prothorace profunde trisulcato; antennarum articulo ultimo subquadrato, parum transverso.
Mas clypei medio longius spinoso-producto.
Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

In the male of this species the head has the whole of the back part densely strigose, and there is an elongate, oblique, longitudinal channel on each side, but no conspicuous depression in the middle, and the anterior part is polished, and produced so as to form a long spine; the middle of the hind margin of the last ventral segment projects a little, thus forming a short, broad, subacuminate lobe.

We have received only two males of this species; though extremely similar to *O. spinifrons*, it differs in the sexual characters, and is therefore probably distinct.

13. **Oxytelus stipes.**

Piceus, nitidus; elytris dilutioribus, antennis apicem versus sordide testaceis, mandibulis pedibusque testaceis; prothorace profunde trisulcato, haud punctato; elytris brevibus, profunde strigoso-punctatis.
Mas clypei medio longius spinoso-producto.
Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

We have only a single male of this species, and, though very similar to *O. spinifrons* and *O. armatifrons*, there is little doubt it is distinct. The antennæ are rather long and slender, neither the fifth nor the tenth joint being transverse. The head is densely, regularly, longitudinally strigose on the disc, the vertex, however, being shining and canaliculate in the middle; on either side there is a remarkably conspicuous elongate, oblique, longitudinal channel, and the polished clypeus is produced in front to form a very long spine. The thorax is very short. The abdominal characters are

very slight, almost the same as in *O. spinifrons*, the chief one being that the penultimate segment has some fine punctuation on the middle of the hind margin.

14. **Oxytelus latifrons.**

Niger, nitidus; elytris piceis, antennarum basi, mandibulis pedibusque testaceis; prothorace trisulcato, interstitiis latioribus, parce punctatis; elytris punctatis, vix strigosis.
Mas clypei medio longius spinoso-producto.
Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Head of the male short and broad; the vertex smooth, not channelled, the middle finely strigose; clypeus polished, and produced into a very long spine in front, the oblique channel on each side deep; mandibles very long. Terminal ventral plate deeply bisinuate, so that the middle forms a short, broad lobe; hind margin of the penultimate segment emarginate in the middle, and obsoletely punctate in front of this.

Though we have only one male, and it is very close to the three preceding species, it will probably be found more easy to separate it, as the intervals between the thoracic grooves are rather more flattened and broader.

15. **Oxytelus incilis.**

Piceus, capite nigro, pedibus flavis; clypeo nitido, vertice strigoso-punctato; prothorace profunde trisulcato; elytris brevibus, parce punctatis, vix strigosis.
Mas clypei medio breviter spinoso-producto.
Long. 3 millim.

Hab. GUATEMALA, Coatepeque 1300 feet (*Champion*); PANAMA, San Miguel in the Pearl Islands (*Champion*).

This is smaller than either of the foregoing species, and has joints 7–10 of the antennæ transverse. The head has the vertex strigose, and a short channel in the middle; it has no oblique lateral channel. There is very little punctuation on the thorax, and the sculpture of the elytra is much effaced. The male can be readily distinguished from the female by its head being larger and spinose in front; this sex is destitute of any notable abdominal character.

16. **Oxytelus exaratus.**

Niger, sat nitidus; fortiter strigosus; pedibus flavis, mandibulis antennarumque articulo ultimo rufescentibus; prothorace profunde trisulcato.
Long. 4 millim.

Hab. GUATEMALA, Balheu in Vera Paz 3000 feet (*Champion*).

This, though closely allied to the preceding species, is readily distinguished from all of them by the dense coarse strigosity of the wing-cases, on which no punctures can be detected. We have only one example, which is no doubt a female. The antennæ are elongate, the basal joints piceous, the penultimate joint quite as long as broad, the

terminal joint very long and of a dull red colour. The clypeus is rounded in front, and shining, though bearing a few punctures; the vertex coarsely strigose. The thorax is somewhat strigose, but obscurely so on account of the deep grooves and the large lateral depressions occupying the greater part of the surface. The elytra are a good deal longer than the thorax. The hind body is black and shining.

17. **Oxytelus externus.**

Rufo-piceus, nitidus; antennis pedibusque testaceis; capite medio sublævigato, angulis posterioribus sculpturatis; prothorace profunde trisulcato; elytris sublævigatis, haud strigosis sed parce punctatis minuteque setosulis.

Mas clypei medio producto; lobo elongato, deplanato, apice subobtuso.

Long. 3 millim.

Hab. Panama, Bugaba (*Champion*).

This is a very distinct species, of which only one example has been obtained; it will be readily distinguished by the pallid antennæ and by the different form of the cephalic spine, which is here straight, flattened, and almost blunt at the extremity. The mandibles are elongate. The head is nearly smooth in the middle, though there is a very distinct sculpture at the hind angles. The thorax has very deep grooves, and also a very fine distant punctuation which is still more indistinct than that on the elytra. I do not observe any sexual character on the hind body.

APOCELLUS.

Apocellus, Erichson, Gen. et Spec. Staph. p. 812 (1840); Leconte, Tr. Am. Ent. Soc. vi. p. 247.

This genus contains fifteen described species—all from temperate and tropical regions of the New World. The genus is a very distinct one, and some of its species have been mistaken for members of the "Aleocharinæ"; the male characters are remarkable and unlike those of any other known Coleoptera. Leconte records the North-American species as of stercoraceous habits, and Mr. Champion makes a similar statement about those of our region.

1. **Apocellus sphæricollis.** (Tab. XVIII. fig. 13.)

Lathrobium sphæricolle, Say, Tr. Am. Phil. Soc. iv. p. 455[1]; Lec. Complete Writings of Thomas Say, ii. p. 570[2].

Apocellus sphæricollis, Er. Gen. et Spec. Staph. p. 813, t. 2. f. 5[3]; Lec. Tr. Am. Ent. Soc. vi. p. 248[4].

Hab. North America[1 2 3 4].—Mexico (*Truqui*, *Flohr*), Guanajuato (*Sallé*), Yautepec (*Flohr*), Jalapa, Tehuacan, Cerro de Plumas, Mirador (*Höge*), Cordova (*Höge*, *Sallé*), Teapa (*Chevrolat*); Guatemala (*Sallé*), near the city (*Salvin*, *Champion*), San Gerónimo (*Champion*).

I am not able to discriminate more than one species amongst the large number of examples before me, though they vary much in colour and size, and somewhat in the

form of the peculiar lateral wings of the terminal segment of the male. The specimens in Sallé's collection were separated as several species with MS. names of Fauvel attached. Erichson's outline figure is not satisfactory, and we consequently give one taken from the well-developed male example found by Mr. Salvin. In Chevrolat's collection two examples of an *Apocellus* are labelled as having been received from Erichson as *A. sphæricollis*; these, however, are a distinct species (*A. nigriventris*, Chevr. in litt.), and it seems as if Erichson's figure had been made partly from one of these examples, and partly from *A. sphæricollis*. This insect is very widely distributed in the Southern United States.

2. **Apocellus analis.**

Apocellus analis, Lec. Tr. Am. Ent. Soc. vi. p. 247[1].

Hab. North America, Louisiana [1], California [1], Arizona [1].—Mexico, Cordova (*Höge*).

3. **Apocellus cognatus.** (Tab. XVIII. fig. 14.)

Politus, rufo-testaceus, abdominis apice nigro, parce longiusque setosus, nitidus, impunctatus; prothorace subquadrato, basin versus leviter angustato.

Long. $3\frac{1}{4}$–4 millim.

Hab. North America, Opelousas in Louisiana (*Sallé*). — Guatemala (*Sallé*), Champerico, Rio Naranjo, near the city of Guatemala, San Gerónimo (*Champion*); Honduras (*Sallé*); Nicaragua, Managua (*Sallé*).

Antennæ elongate, thicker externally. Head large, subquadrate, broader than the thorax, truncate behind. Thorax rather broader than long, the sides nearly straight, a little narrowed behind. Elytra broad and short, much wider and a little longer than the thorax. Hind body broad. In the male the hind margin of the penultimate ventral plate is somewhat emarginate and very slightly deflexed in the middle, and the following segment is broadly but feebly impressed.

This insect is allied to *A. analis*, Lec., but has a comparatively feeble development of the male characters. The examples from Guatemala city and San Gerónimo are darker in colour and have a decidedly greater development of the male characters; they may be distinct but are in very decayed condition, and the dark colour may be the result of this. The unique exponent from Honduras is a very large male of dark colour, and it also may possibly be distinct.

4. **Apocellus muticus.**

Sat latus, politus, rufus; elytris dimidio apicali fusco, abdominis apice nigro; prothorace subquadrato, basin versus angustato.

Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Vera Cruz (*Höge*).

Very similar to *A. analis*, but the thorax is narrower, and not broader than long; the basal half of the wing-cases pallid, the apical half fuscescent. The male characters

are excessively slight, the penultimate segment being simple, and the terminal segment possessing only a slight depression along the middle. Unique.

5. **Apocellus gracilis.**

Gracilior, politus, fusco-rufus, pedibus testaceis; prothorace subquadrato, basin versus angustato; elytris quam prothorax paullo angustiore.
Long. 3 millim.

Hab. Mexico (*Truqui*), Guanajuato (*Sallé*).

This is a smaller insect than *A. cognatus*; the male especially is much smaller, with feeble sexual characters, the penultimate ventral ring being nearly simple, the terminal segment deeply and broadly depressed.

6. **Apocellus barbatus.**

Gracilior, politus, nigricans; pedibus albidis, femoribus extrorsum fuscis; antennis elongatis, articulo ultimo rufescente; prothorace minus quadrato, basin versus angustato.
Long. 3 millim.

Hab. Panama, David, Bugaba (*Champion*).

This insect is smaller than the smallest examples of *A. sphæricollis*, and has different male characters. The thorax is convex and more globose than in *A. analis* and *A. cognatus*, though strongly narrowed behind. The elytra are rather longer than the thorax. The hind body is comparatively slender, and the basal segment is yellowish in colour. In the male the penultimate ventral segment is nearly simple, its hind margin being, however, slightly incrassate and emarginate in the middle; the terminal segment is only feebly impressed, but has a group of very long slender setæ on each side at the outer hind corner of the depression. Four examples.

7. **Apocellus præstans.**

Gracilis, nigricans, politus; elytris fuscis, marginibus dilutioribus; antennis rufis, ante apicem fuscescentibus; pedibus flavis; prothorace subgloboso.
Long. 3 millim.

Hab. Guatemala, near the city, Zapote (*Champion*); Panama, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Exceedingly similar to some of the smaller varieties of *A. sphæricollis*, but the thorax is shorter and distinctly transverse. The male characters are also quite different: the hind margin of the penultimate ventral segment is armed with a much larger plate than in *A. sphæricollis*; this plate is but little curvate, and projects obliquely backwards; there are lateral wings on the terminal segment, but the wings are not elongate and their margins are fringed with long ciliæ; the basal portion of the terminal segment, under the protection of the lamina of the preceding segment, is very deeply impressed, and is either minutely sculptured or furnished with a fine pnbescence, I am unable to say which.

Of this little species, with such remarkable male characters, we have received only one example from each locality: the male from the city of Guatemala has the hind body contracted, and as I have been unable to restore it to its natural length I cannot say if the structure of the terminal segments agrees exactly with that of the typical example from Chiriqui.

8. **Apocellus sordidus.** (Tab. XVIII. fig. 15.)

Parvus, minus gracilis, opacus, fusco-niger; elytris dilutioribus; antennis fuscescentibus, basi testacea; pedibus flavis.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador, Mirandilla, near the city of Guatemala, San Gerónimo, Balheu (*Champion*).

Antennæ very stout; joints 4–10 short, the terminal joint more pallid than the preceding. Head small, quite dull, without definite sculpture. Thorax very small, strongly narrowed behind, dull like the head. Elytra rather longer than the thorax; very finely, densely, and minutely punctulate, not so dull as the head and thorax. Hind body broad, moderately shining. Legs entirely pallid. In the male there is a slight lamination and deflection of the middle of the hind margin of the penultimate ventral plate, and the following segment is broadly deplanate along the middle.

TROGOPHLŒUS.

Trogophlœus, Mannerheim, Brach. p. 49 (1830); Erichson, Gen. et Spec. Staph. p. 801; Leconte, Tr. Am. Ent. Soc. vi. p. 242.

This genus at present includes about one hundred described species; it is very widely distributed, occurring even in oceanic islands. The genus is no doubt one of the most extensive of the Staphylinidæ, but its species have been as yet but little collected and studied; Leconte records about fifty species known to him as occurring in America north of Mexico, but the greater portion still remain undescribed. A comparatively small number of species, represented only by very few examples, have yet been obtained in our region, and I have little doubt that Central America harbours many others in addition to those recorded here.

1. **Trogophlœus fulvipes.**

Trogophlœus fulvipes, Er. Gen. et Spec. Staph. p. 804[1]; Lec. Tr. Am. Ent. Soc. vi. p. 247[2].

Hab. NORTH AMERICA, Southern States[2].—GUATEMALA, near the city, Dueñas, Paso Antonio, San Gerónimo, San Joaquin (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).—ANTILLES, Puerto Rico[1 2].

2. **Trogophlœus suffusus.**

Angustus, subdepressus, subnitidus, nigricans; prothorace piceo, elytris rufis, antennarum basi apiceque cum pedibus testaceis; prothorace dorso bi-impresso; elytris minus obsolete punctulatis.
Long. $2\frac{3}{4}$ millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

Antennæ short and stout; third joint smaller than the second, the penultimate joint strongly transverse. Head a little narrower than the thorax; eyes small. Thorax not very strongly transverse; much rounded at the sides, so that the front angles are quite obtuse; surface visibly punctulate, the disc with two elongate impressions. Elytra rather longer than the thorax, rather closely and distinctly punctate, somewhat shining. Hind body becoming broader towards the apex. Unique.

This *Trogophlœus* has an appearance quite similar to the European species of the *T. riparius* and *T. corticinus* group; it is not closely allied to any of the others here recorded.

3. **Trogophlœus planellus.** (Tab. XVIII. fig. 16.)

Sat latus, subdepressus, sat nitidus, nigricans; antennis fusco-testaceis, basi pedibusque testaceis, elytris fulvis; prothorace fortiter transverso, basi minus profunde bi-impressa, angulis anterioribus obtusis; elytris quam prothorax multo longioribus, densius, subtiliter, sed perspicue, punctulatis, sat nitidis.
Long. $2\frac{3}{4}$ millim.

Hab. GUATEMALA, Rio Naranjo (*Champion*); PANAMA, Bugaba (*Champion*).

Antennæ slender, thicker externally; penultimate joint about as long as broad. Head broad, very short; eyes large. Thorax twice as broad as long, rounded at the sides and much narrowed behind, quite truncate in front; anterior angles but little deflexed, obtuse; the two basal impressions short and rather indefinite. Elytra much longer than the thorax, finely but quite distinctly punctulate, shining.

This species is very closely allied to the Cuban *T. aridus*, Jacq. Duv., but is considerably smaller, has shorter antennæ, more pallid elytra, and less distinct thoracic impressions. It varies in the colour of the elytra, which sometimes are nearly black.

4. **Trogophlœus filarius.**

Angustus, haud convexus, dense subtilissimeque punctulatus, subopacus, nigricans; antennis pedibusque testaceis, illis extrorsum magis obscuris; prothorace minus transverso, basin versus angustato, angulis anterioribus rotundatis et fere æquali; elytris fulvis.
Long. 2 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ short and rather slender; third joint much smaller than the second, the penultimate joint slightly transverse. Head short, deeply bi-impressed. Thorax rather broader than long; the front angles rounded, whence the sides are narrowed to the base; the surface very finely punctulate, feebly shining, just visibly bi-impressed at the

base. Hind body dull, excessively finely and densely punctulate; distinctly broader from the base towards the extremity. Two examples.

5. Trogophlœus curtulus.

Brevis, subdepressus, tenuissime punctulatus et pubescens, nitidus, nigricans; antennis pedibusque testaceis, illis extrorsum magis obscuris; elytris fuscis, apicem versus rufescentibus; prothorace fortiter transverso, lateribus rotundatis, obsolete bi-impresso.

Long. vix 2 millim.

Hab. Guatemala (*Sallé*), Torola 1000 feet (*Champion*); Panama, San Miguel in the Pearl Islands (*Champion*).

Antennæ short; third joint much smaller than the second, the penultimate joint rather strongly transverse. Head very broad and short, deeply bi-impressed. Thorax broad and very short; front margin and sides curvate, so that no anterior angles can be seen; the disc with two elongate but obsolete depressions. Elytra distinctly longer than the thorax, shining, feebly and not densely punctate. Hind body shining.

This insect is allied to the Cuban *T. fulvipennis*, Fauv., but is larger, has a somewhat different punctuation, and the thoracic impressions obsolete.

6. Trogophlœus nigrellus.

Brevis, niger, nitidus, tenuissime punctulatus et pubescens; antennarum basi pedibusque fusco-testaceis prothorace fortiter transverso, fere inimpresso, vix perspicue punctulato.

Long. vix 2 millim.

Hab. Guatemala, El Tumbador, Rio Naranjo, Cerro Zunil, San Joaquin (*Champion*).

Antennæ very short, much thicker externally; penultimate joints strongly transverse. Head very short; eyes but little convex, well separated from the hind margin. Thorax strongly transverse; sides rounded, much narrowed behind; front angles depressed and rounded; surface almost even and impunctate, shining. Elytra broad and short, shining, feebly punctulate.

This species is closely allied to *T. curtulus*, but differs in numerous minor characters. We have received about a dozen examples.

7. Trogophlœus excellens.

Brevis, niger, nitidus, tenuiter punctulatus; antennis basi pedibusque testaceis; prothorax quam elytris multo angustiore, basin versus angustato, dorso bi-impresso.

Long. 2 millim.

Hab. Guatemala, Rio Naranjo (*Champion*).

Antennæ rather short, not stout, the penultimate joints only slightly transverse. Head very short; eyes large, reaching nearly to the hind angles. Thorax small, much narrowed behind, shining, finely punctulate; with a well-marked depression,

which is divided into two by a short definite elevation. Elytra much longer than the thorax, feebly punctulate, shining. Legs yellow, slightly infuscate.

Though very similar to *T. nigrellus*, this species is distinguished by well-marked characters, especially the larger eyes and deeply impressed thorax. Three examples.

8. **Trogophlœus insignellus.**

Brevis, convexus, nitidus, nigricans; antennis, pedibus elytrisque testaceis, his disco infuscatis; prothorace fusco, brevi, lateribus rotundatis, dorso bi-impresso.
Long. $1\frac{1}{2}$ millim.

Hab. Guatemala, El Reposo (*Champion*).

A distinct little insect, resembling a miniature *Bledius*, though not belonging to the subgenus *Troginus*, Rey, which includes most of the minute *Bledius*-like *Trogophlœi*. Antennæ very short; third joint minute, the penultimate one strongly transverse. Head very short, deeply bi-impressed. Thorax transverse, shining, scarcely punctulate; with two rather deep impressions on the middle. Elytra much longer than the thorax; feebly, rather closely punctulate, shining. Unique.

9. **Trogophlœus misellus.**

Brevis, niger; antennarum basi pedibusque sordide testaceis; prothorace sat elongato, basin versus angustato, inimpresso; elytris quam prothorax longioribus, subtilius punctulatis.
Long. $1\frac{7}{8}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Antennæ short, the penultimate joints rather strongly transverse. Head short; eyes not large, placed close to the base; the constriction forming the neck extremely slight. Thorax strongly narrowed behind, the sides curvate, the front angles quite invisible; very finely punctulate, without any trace of depressions. Elytra longer than the thorax, finely punctulate. Unique.

This little insect resembles the European *T. exiguus*, but the structure of the head, *e. g.* very short so that the eyes are placed close to the thorax, will not allow it to be placed in the subgenus *Troginus*, Rey, of which *T. exiguus* is the type.

10. **Trogophlœus velutinus.**

Brevis, niger; antennarum articulo basali pedibusque testaceis; prothorace brevi, cumque capite nigerrimo, quasi velutino, inimpresso; elytris evidenter punctulatis; abdomine nitidulo.
Long. $2\frac{1}{8}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ short, the penultimate joints strongly transverse. Head short and broad, rather abruptly constricted behind the eyes, only feebly bi-impressed; intensely black, quite dull. Thorax nearly twice as broad as long, curved at the sides and narrowed behind; very black, quite dull, not visibly punctate. Elytra a good deal longer than the thorax, closely and finely punctate, feebly shining. Hind body more distinctly shining.

A very distinct little species with points of resemblance to *T. misellus* and *T. punctipennis*. Only one example was obtained.

11. **Trogophlœus punctipennis.** (Tab. XVIII. fig. 17.)

Brevis, nigerrimus; pedibus fuscis, opacus; elytris fortiter punctatis, subnitidis.
Long. $1\frac{7}{8}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ short, the penultimate joints strongly transverse. Head narrow, scarcely at all constricted behind. Thorax narrow, rather broader than long; surface feebly uneven, very black and dull, not visibly punctate. Elytra rather longer than the thorax; deeply, rather closely, and coarsely punctured.

Four examples were obtained of this very distinct little *Trogophlœus*.

12. **Trogophlœus centralis.**

Latus, subdepressus, nigricans, pube breve erecta vestitus; antennarum basi pedibusque sordide rufis; prothorace basin versus curvatim impresso; elytris sat fortiter punctatis.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Cahabon, Lanquin (*Champion*); PANAMA, Caldera in Chiriqui 1200 feet (*Champion*).

Antennæ a little thicker externally; third joint longer than the second, the penultimate joint about as long as broad. Thorax rather broader than the head, not much more than half the width of the elytra; the sides rounded in front, strongly narrowed behind; the surface somewhat coarsely but indefinitely punctured, the punctuation effaced on the middle, where there are two very obsolete depressions; the curved impression in front of the base large and distinct. The elytra are shining, much longer than the thorax, and coarsely punctate.

This species is extremely similar to the European *T. scrobiculatus*, Er., but has a narrower thorax, as well as other slighter distinctions. Seven examples.

13. **Trogophlœus triangulum.**

Niger, antennarum basi pedibusque testaceis, elytris rufis et ad suturam angulariter nigro-signatis; pube minus obsoleta vestitus, sat fortiter punctatus; prothorace basin versus profunde curvatim impresso.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Chiacam 2000 feet (*Champion*).

This insect is allied to *T. centralis*; in addition to the colour of the elytra it differs in being narrower, and also in other slight details. The disc of the thorax is punctate as well as the sides, but has scarcely any trace of depressions; the suture of the elytra is black and the dark colour extends itself in a vague manner so as to form a triangle with its apex at the extremity of the suture; the pubescence of the hind body is remarkably distinct. One example.

In this species the tip of the scutellum is minutely exposed, as in the genus *Thinodromus*, Kr.

14. **Trogophlœus mollis.** (Tab. XVIII. fig. 18.)

Niger, femoribus antennarumque articulo basali rufo; densissime subtilissimeque punctatus et pubescens; capite lato, posterius truncato; prothorace brevi, dorso impresso, ante basin curvatim depresso.

Long. $3\frac{1}{8}$ millim.

Hab. GUATEMALA, Coban, San Gerónimo (*Champion*); PANAMA, David (*Champion*).

Antennæ rather short, the penultimate joint slightly transverse. Head very broad, rather broader than the thorax. Thorax strongly transverse, much narrower than the elytra; with a large depression on the disc, a curvate depression behind this, and a vague depression near each side. Elytra like the thorax, very finely, scarcely perceptibly punctulate. Five examples.

Closely allied to the Cuban *T. croceipes*, Fauv.

15. **Trogophlœus vittatus.** (Tab. XVIII. fig. 19.)

Niger, antennarum articulo basali pedibusque testaceis; subtilissime punctulatus et pubescens; elytro singulo juxta suturam testaceo-vittato.

Long. 3 millim.

Hab. GUATEMALA, Coban (*Champion*).

Head not broad, but little truncate on either side behind the eyes. Thorax obsoletely bi-impressed on the disc and at each side, but with a deep curvate basal depression. Elytra with a broad, longitudinal, pallid vitta very close to the suture. Unique.

This species resembles *T. mollis* in the excessively fine punctuation and pubescence, but differs from it in numerous other characters.

TROGACTUS.

Corpus gracile, haud depressum. Antennis pedibusque gracilibus. Palpi maxillares sat elongati; articulo ultimo minutissimo, setiformi. Scutellum parvum.

These elegant insects are allied to *Trogophlœus*, but differ strikingly by their long limbs, and the visible scutellum. The palpi are rather long; the pseudo-terminal joint slender, but still a little broader than that preceding it; the terminal joint is peculiar, and being like a small hair (truncate at the extremity, and not at all thicker at the base) is only visible with a strong magnifier. The front coxæ are rather long, vertical, and their cavities have scarcely any extension outwards towards the front angles of the thorax.

There are no known Staphylinidæ very similar in appearance to the species of this genus. These insects are found, Mr. Champion informs me, on the sandy banks of mountain streams in the forest.

1. **Trogactus funebris.** (Tab. XVIII. fig. 20.)

Niger, tibiarum apicibus tarsisque rufis; opacus, omnino subtilissime densissimeque punctatus; prothorace cordato, disco obsolete bi-impresso.
Long. 6 millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet, Bugaba (*Champion*).

Antennæ very elongate and slender, scarcely at all thicker externally; third joint longer than the second, several times longer than broad. Thorax slightly broader than the head, only about half the width of the elytra, about as long as broad; sides rounded in front, and much narrowed behind; surface quite dull, scarcely visibly punctate, the disc with two elongate vague depressions. Elytra ample, quadrate. Hind body elongate, scarcely visibly punctate. Three examples.

2. **Trogactus championi.**

Nigerrimus, tibiarum apicibus tarsisque rufis; opacus, subtilissime densissimeque punctatus; prothorace transversim cordato, disco longitudinaliter bi-impresso.
Long. 7 millim.

Hab. Panama, Peña Blanca 3000 to 4000 feet (*Champion*).

Very closely allied to *T. funebris*, but rather larger; the articulations of the antennæ a little longer; the thorax slightly shorter and broader; the elytra a little longer, rather more than twice as long as the thorax; and the punctuation of the surface slightly less dense, so that the insect is not quite so dull. The tarsi are much longer than those of *T. funebris*.

The only example captured of this remarkable insect is unfortunately in a very decayed condition.

3. **Trogactus elegans.**

Gracilior; niger, antennarum apice pedibusque testaceis, femoribus extrorsum tibiisque fuscescentibus; subopacus, densissime subtilissimeque punctatus.
Long. 5 millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ very long and slender, the terminal two joints testaceous. Thorax slender, subcordate, very obsoletely bi-impressed on the disc; quite dull, without visible punctuation. Elytra slightly shining, densely and finely punctulate. Tarsi very short. Also unique.

4. **Trogactus godmani.** (Tab. XVIII. fig. 21.)

Gracilior, sat nitidus; pallide brunneus, antennis pedibusque testaceis; prothorace cordato, basin versus profunde impresso.
Long. $3\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ very long and slender, the middle joints very slightly infuscate. Thorax with a large impression (deep near the base, but becoming more shallow as it extends

forwards), the sides also depressed, shining, the basal portion finely punctate. Elytra nearly twice as long as the thorax, closely and finely punctate, shining. Tarsi very minute. Three examples.

The tarsi in this elegant insect are very short, and so slender that without a good lens they are not perceptible; in our figure they appear too large.

PAROSUS.

Corpus depressum, punctatum. Mandibulæ porrectæ, curvatæ. Labrum in medio profunde emarginatum, utrinque denticulatum. Abdomen alte marginatum. Tibiæ muticæ.

In facies this new genus is intermediate between *Charhyphus* and *Eleusis*; the structure of the labrum is, however, very peculiar and will allow *Parosus* to be readily recognized. The clypeus is sinuate on either side so that the middle is prominent, and the labrum very exposed; the latter is small, armed with two widely separated denticles and between these emarginate. The antennæ are 11-jointed, rather short, and inserted at the sides of the head in front of, and rather near to, the eyes. The terminal joint of the maxillary palpus is slender and subulate, the preceding joint rather large. The prosternum is rather short, the coxæ only very slightly exserted; the latter are rather widely separated from the lateral margin, and the side-piece of the prosternum gives off no distinct process behind them, and there is no external transverse fissure. The middle coxæ are moderately large, contiguous; the internal laminæ of the hind coxæ rather small; the trochanters quite small. The legs are slender; the tibiæ long, slender, unarmed; the tarsi three-jointed, the two basal joints quite small, the terminal joint long and slender.

Although the single species I include in this genus apparently has an affinity with *Eleusis* and the anterior coxæ when seen from the front appear very short, yet the structure of the prosternum and other characters locate the insect near *Oxytelus* and *Trogophlœus*. It is possible that the North-American genus *Triga*, Fauv., may be allied to *Parosus*, though from the description I can say the two are not identical.

1. **Parosus hilaris.** (Tab. XIX. fig. 1.)

Rufo-testaceus, capite, abdomine ante apicem elytrisque nigricantibus, his humeris late rufis; capite majore, dense fortiterque punctato; prothorace basi lateribusque rotundatis.

Long. $3\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ short, the first joint nearly equal to the three following joints together; the third joint smaller than the second, the penultimate joints not so long as broad. Head very large, very coarsely and densely punctured. Thorax short; sides greatly rounded and narrowed behind, so that there are no hind angles and the narrow truncate base is but little differentiated from the sides; rather coarsely and closely punctured, with a smooth space along the middle. Elytra longer than the thorax, rather closely and finely punctate. Hind body feebly pubescent, almost impunctate. Two examples.

Group **THINOBIINA.**

It is necessary to separate *Thinobius* and its immediate allies from the other groups of the subfamily "Oxytelinæ," as they possess a different structure of the prothoracic side-pieces and of the front coxæ, making some approach in these respects to the subfamily "Aleocharinæ."

THINOBIUS.

Thinobius, Kiesenwetter, Stett. ent. Zeit. 1844, p. 355; Leconte, Tr. Am. Ent. Soc. vi. p. 239 (1877).

This genus comprises at present about twenty species, all from the European and North-American region, with the exception of one from Chili. They are amongst the most minute of Coleoptera, and it is quite probable that the genus will prove to be rich in species and widely distributed. The different species are found in muddy places, and especially about the sandy banks of rivers and streams.

1. **Thinobius tenuis.** (Tab. XVIII. fig. 22.)

Fusco-piceus, antennis pedibusque sordide testaceis; antennis longissimis, fere ad elytrorum apicem attingentibus; omnino subtilissime punctulatus, opacus.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ slender and elongate; third joint more slender and much shorter than the second; terminal three joints very elongate, scarcely perceptibly thicker than those preceding them. Thorax obscure red, nearly straight at the sides, rather strongly transverse. Elytra one and a half times as long as the thorax. Hind body distinctly pubescent.

This insect is about the size of the European *T. longipennis*, but has a more elongate head and thorax and remarkably long antennæ. Five examples. In our figure the antennæ are represented as very much thicker than they should be.

2. **Thinobius thripsoides.**

Fuscus, antennarum basi pedibusque sordide testaceis; antennis tenuibus, modice elongatis; omnino subtilissime punctulatus.
Long. $1\frac{1}{8}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ with the terminal joints slender, though slightly broader than the others; none of the joints transverse, the terminal joint short. Head very narrow, the eyes very small. Thorax about twice as long as broad. Elytra about twice as long as the thorax, very dehiscent at the apex. Two examples.

This species is extremely similar to the European *T. longipennis*, but is not half the size, and has a narrower head and smaller eyes.

3. **Thinobius curtellus.**

Fuscus, abdomine nigricante, antennis, pedibus elytrorumque apice testaceis; antennis minus elongatis; omnino subtilissime punctulatus.
Long. 1 millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*).

Antennæ clear yellow, rather stout; fifth joint considerably longer than broad, longer than either of those adjacent to it; ninth and tenth joints scarcely transverse; terminal joint moderately long. Head subcircular. Thorax rather strongly transverse, much rounded at the sides. Elytra nearly twice as long as the thorax. Hind body distinctly punctulate and pubescent. Nine examples.

4. **Thinobius nigricans.**

Niger, pedibus sordide testaceis; angustus, subtilissime punctulatus, opacus; capite parvo; antennis haud elongatis, crassiusculis.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ evidently thicker externally, dark fuscous, the penultimate joints a little transverse. Head rather short and broad, slightly broader from behind the eyes, and rather abruptly narrowed at the neck. Thorax rather strongly transverse. Elytra one and a half times as long as the thorax. Unique.

5. **Thinobius agilis.**

Minutissimus, angustus, niger; antennis pedibusque testaceis, illis minus elongatis, crassiusculis; obsolete punctulatus.
Long. $\frac{3}{4}$ millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*).

Antennæ short and stout; third joint not longer than broad, the fourth strongly transverse, the fifth rather longer, the sixth similar to the fourth, the four following joints rather broader, differing little from one another, transverse, the terminal joint quite twice as long as the tenth. Head elongate. Thorax with the sides and base much rounded, nearly twice as broad as long. Elytra much longer than the thorax. Hind body rather narrower at the base than near the apex.

This is one of the most minute species of Coleoptera, nevertheless Mr. Champion secured and preserved a dozen examples.

THINOPHILUS.

Thinophilus, Rey, Hist. Nat. Col. Fr. Oxyteliens, p. 322 (1879) *.

This genus has recently been established to receive a portion of the European species

* This generic name has long been preoccupied in Diptera (Wahlb. 1844) and cannot be retained in Coleoptera; for the purposes of this work, however, I have not thought it necessary to change it.

placed by previous writers in *Thinobius*. Possibly the North-American *Thinobius brachypterus*, Lec., may belong to it.

1. **Thinophilus dissimilis.**

Fusco-testaceus, antennarum basi pedibusque testaceis; angustior, subparallelus, sat dense punctulatus, subnitidus; prothorace leviter inæquali.
Long. $1\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Very slender. Antennæ rather stout, slightly thicker externally; penultimate joints slightly transverse. Head subquadrate, truncate behind the eyes, the neck abrupt. Thorax transverse, the sides straight, very faintly punctulate; the surface rather uneven, the vague depressions most distinct near the base. Elytra long and narrow, extremely finely punctulate. Unique.

SCIOTROGUS.

Facies fere Aleocharinarum. Corpus elongatum, subdepressum. Antennæ filiformes. Caput tuberculis antennariis haud discretis; oculis parvis. Coxæ anteriores subtransversæ. Tarsi triarticulati, articulis basalibus brevissimis. Elytra apice truncato.

I establish this genus upon a very interesting though obscure little insect, which makes in structure as well as in appearance a considerable approach to the "Aleocharinæ"; it is, however, undoubtedly a member of the "Oxytelinæ." The antennæ are eleven-jointed, not in the least clavate, inserted at the sides of the head close to the eyes, with only a very obscure tubercle over the point of insertion. The clypeus, though small, exists and is defined by an obscure suture. The eyes are small, coarsely faceted. The maxillary palpi are very short; the pseudo-terminal joint stout, subovate, with truncate extremity, the true terminal joint not visible. The prosternum is short, and the front coxæ extend to near the sides, the side-piece behind the coxa being quite short and obtuse. The middle coxæ are small and contiguous. The legs are rather short, compressed; the tibiæ broader in the middle than at the extremity, and without spines. The tarsi are very small. The hind body is margined, and very similar to that of the "Aleocharinæ." The elytra are truncate at the extremity. The texture of the surface and the minute pubescence are more suggestive of the *Trogophlæi* than of any other Staphylinidæ.

The examples are in a very decayed condition: most of them appear to have lost their palpi, and I cannot see the exact form of the two basal joints of the tarsi. The insertion of the antennæ under the edge of the side of the head renders it clear that the insect cannot be placed in the subfamily "Aleocharinæ," and I think the genus truly belongs to the group "Thinobiina."

1. **Sciotrogus opacus.** (Tab. XVIII. fig. 23.)

Fusco-cinnamomeus, pedibus testaceis; omnino obsoletissime punctatus, peropacus.
Long. $2\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ of nearly equal thickness throughout; third joint a little shorter than the second. Head small, not visibly sculptured; eyes not prominent. Thorax transverse, nearly truncate (very feebly bisinuate) in front; the sides slightly, the base very strongly, curved; the surface without impressions and not visibly sculptured. Elytra much longer than the thorax. Hind body with very fine punctuation and pubescence, the latter, however, more distinct than on the anterior parts; on the terminal two segments the punctuation and pubescence are very obsolete.

Group **PHLŒOCHARINA.**

This group cannot very well be defined at present; the chief reason for retaining it is that the few genera it comprises cannot be satisfactorily placed in the other groups of "Oxytelinæ."

ECBLETUS.

Corpus glabrum, depressum, abdomine parce pubescente. Tarsi quinque-articulati, posteriores elongati. Palpi maxillares articulo ultimo breviter conico. Antennæ undecim-articulatæ, filiformes.

The insect for which this genus is established is a peculiar one, having the appearance of an *Omalium* though really allied to *Olisthærus* and *Phlœocharis*. The mandibles are short, thick, and curvate and acuminate at the apex. The maxillary palpi are short and thick; the terminal joint as broad at the base as the penultimate joint, thence gradually narrowed to the apex. The anterior coxæ are oblique, moderately exserted, and extend nearly to the front angles of the prosternum; the side-piece of the prothorax is rather small, and only slightly enlarged behind the coxa, though distinctly broader there than it is nearer to the front. The middle coxæ are contiguous; the hind coxæ transverse, their interior laminæ rather small; the hind trochanters small. Tarsi 5-jointed; the basal joints rather stout, those of the front pair slightly dilated in the male; posterior pair with the first joint distinctly longer than the second, the second, third, and fourth joints subequal in length, and the terminal joint nearly as long as the preceding four joints together.

1. **Ecbletus simplex.** (Tab. XVIII. fig. 24.)

Niger, nitidus, elytris castaneis; antennis, palpis pedibusque flavis; fere impunctatus; elytris elongatis, obsolete rugulosis.

Long. $3\frac{1}{4}$ millim.

Hab. Panama, San Miguel in the Pearl Islands (*Champion*).

Antennæ rather stout; second joint stout, longer than the third; joints 4–8 differing little from one another and neither of them quite so long as broad, 9 and 10 rather longer, the terminal joint short; no elevations over the points of insertion. Eyes rather small, very finely faceted. Thorax strongly transverse, truncate in front, slightly curved at the sides; even, black, shining, not visibly punctate. Scutellum scarcely

visible. Elytra elongate, without punctures, but shining and with a feeble irregular longitudinal wrinkling. Hind tarsi about as long as the tibiæ.

Three examples were obtained of this unattractive but anomalous insect.

CHARHYPHUS.

Corpus elongatum, depressum, punctatum. Palpi maxillares breves; articulo ultimo sat elongato, tenui, subulato. Coxæ anteriores parvæ, subglobosæ. Prosternum utrinque posterius processu brevi munitum.

This genus consists of a single species, of which only one example has been found, and is allied to *Phlœocharis* and to *Eleusis*; it appears to connect the "Phlœocharina" satisfactorily with the "Piestina." The mandibles are prominent; the labrum short and broad, slightly emarginate. The antennæ are short, simple; inserted at the sides of the head considerably in front of the eyes. The maxillary palpi are small, the terminal joint shorter and very much more slender than that preceding it. The prothorax is transverse. The anterior coxæ are only very slightly prominent, and placed at the posterior part of the prothorax; the side-piece of the latter sending off behind them an acuminate though rather short prolongation, which leaves a rather narrow parallel fissure between it and the hind margin of the prosternum. The middle coxæ are rather small and minutely separated; the hind coxæ very nearly contiguous, their internal laminæ rather large. The legs are feeble, the tibiæ slender and unarmed; the tarsi short, apparently 4-jointed, the three basal joints being short and broad and difficult to discriminate, while the terminal joint is quite equal in length to the remaining three together. The hind body is provided with a broad but not much elevated lateral margin.

1. **Charhyphus brevicollis.** (Tab. XVIII. fig. 25.)

Depressus, subopacus, subtiliter pubescens, fuscus; capite nigricante; antennis, pedibus abdominisque apice testaceis; prothorace fortiter transverso, medio basin versus late bi-impresso.

Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ with the third joint slender and but little shorter than the second, the fourth joint minute, the fifth also small; joints 6–10 transverse, the terminal joint small. Head large, flat, coarsely punctate; eyes small. Thorax twice as broad as long, but little curved at the sides, feebly narrowed behind, punctured like the head; the two large impressions in front of the base shallow, but quite distinct. Elytra much longer than the thorax; fuscous, the base and apex more rufescent; more obsoletely punctured than the thorax. Hind body obsoletely punctate, rather closely and distinctly pubescent.

A single example was found under the bark of a pine-tree.

Group **PIESTINA.**

This group received the rank of subfamily from Erichson, and was considered to be differentiated from the "Oxytelinæ" by the front coxæ not being exserted; this character is, however, variable, so that really at present a satisfactory line of demarcation between the two groups cannot be pointed out.

The species of this group are subcortical in their habits, and chiefly found beneath sappy bark.

HYPOTELUS.

Hypotelus, Erichson, Gen. et Spec. Staph. p. 840 (1840); Leconte, Tr. Am. Ent. Soc. vi. p. 249 (1877).

This genus comprises four species from Tropical America and one from Texas. These insects are very similar to one another; but I find the males possess some slight distinctive characters that greatly facilitate the determination of the species.

1. **Hypotelus hostilis.**

Hypotelus hostilis, Fauv. Bull. Soc. Linn. Normand. ix. p. 43[1]; Notices ent. ii. p. 38[2].

Hab. MEXICO, Teapa (*Pilate* [1 2]); GUATEMALA, Cerro Zunil, Zapote, Capetillo (*Champion*).

In the male of this species and in that of *H. pusillus* the basal joint of the antennæ is armed with an acute tooth, and the alternate joints, 3, 5, 7, 9, 11, are armed with longer exserted setæ: the tooth I presume is what Erichson alluded to in his description of the genus by saying "medio introrsum subdentato"; there is, however, no tooth at all in the other sex. Mr. Champion obtained a good series of *H. hostilis* at Zapote; the three examples from Cerro Zunil are all females, and have the elytra slightly longer, and may prove distinct when the male is known; the single example from Capetillo is also a female, and as it differs in some slight details may be a third species. I have not seen any Mexican example, and it is possible that the Guatemalan insect may not really be Fauvel's *H. hostilis*.

2. **Hypotelus lucidus.**

Nigricans, nitidus; antennarum basi pedibusque testaceis; elytris pallide flavis, sutura fuscescente, subtiliter punctatis.

Long. $2\frac{1}{4}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

This insect is almost exactly similar to *H. hostilis*, but is a little smaller, and the antennæ in the male have only a very minute tubercle on the basal joint, and the setæ on the alternate joints shorter. Six examples were obtained, two being males. The Amazonian *H. micans* again is very similar, but has the thorax rather more coarsely punctate, and the antennæ entirely yellow.

3. **Hypotelus marginatus.** (Tab. XIX. fig. 2.)

Niger, pedibus piceis; elytris rufis, nigro-marginatis; prothorace crebre sat fortiter punctato.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Senahu 2500 feet (*Champion*).

Closely allied to *H. hostilis*, but the antennæ are entirely black; and in the male there is no tooth on the basal joint of these organs, the alternate joints being, however, armed with longer setæ. One pair.

ZIROPHORUS.

Zirophorus, Dalman, Sv. Ak. Handl. 1821, p. 371; Anal. ent. p. 23 (1828).
Piestus (pars), Erichson, Gen. et Spec. Staph. p. 830 (1840); Fauvel, Bull. Soc. Linn. Normand. ix. p. 21 (1865); Notices ent. ii. p. 17.

The *Piesti* with elongate mandibles and the head armed in both sexes with porrect prominences or horns form a very distinct genus; they are distinguished quite naturally, even abruptly, from the typical species with short, inconspicuous mandibles, and the head unarmed but more or less depressed in the middle. I propose to revive Dalman's name of *Zirophorus* for the former of the two genera: this course will, I believe, be found convenient, though the three species, viz. *Z. fronticornis*, *Z. penicillatus*, and *Z. spinosus*, on which Dalman established the genus, include amongst them one true *Piestus—penicillatus*.

Zirophorus is one of the most remarkable of the genera of the family, and is peculiar to Tropical America; it includes, in addition to the three species found in our region, *Piestus lacordairei*, Er., *P. longipennis*, Fauv., *P. spinosus*, Lap., *P. capricornis*, Lap., and *P. validus* and *P. frontalis*, Sharp.

1. **Zirophorus planatus.** (Tab. XIX. fig. 3.)

Nigerrimus, depressus, parallelus, nitidus; fronte cornubus duobus porrectis distantibus armato.
Long. 10–12 millim.

Hab. MEXICO, Cordova (*Sallé*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, Sinanja (*Champion*); NICARAGUA, Chontales (*Belt*, *Janson*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Closely allied to *P. spinosus*, Lap., but entirely black in colour, with the frontal horns less parallel, and the clypeal suture sharply angulate in the middle. The disc of the thorax is punctate. The elytra each have five punctate striæ, and a sixth incomplete stria externally. The hind body is punctured at the base and sides of each segment, but the apical portion of each segment is broadly smooth.

This remarkable insect appears to be rare, and Mexico and Guatemala have each yielded as yet but one example. About half a dozen specimens, however, have been brought from Chontales.

2. **Zirophorus bicornis.**

Oxytelus bicornis, Oliv. Encycl. Méth. viii. 2, p. 615[1].
Zirophorus fronticornis, Dalm. Act. Holm. 1821, p. 373; Anal. ent. p. 24, t. 4. f. 1 (1828)[2].
Piestus bicornis, Lap. Etud. ent. i. p. 128[3]; Er. Gen. et Spec. Staph. p. 831[4].

Hab. NICARAGUA, Chontales (*Belt, Janson*), Granada (*Sallé*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—SOUTH AMERICA[3 4], Colombia[1 2].

Var. **oxytelinus.**

Piestus oxytelinus, Lap. Etud. ent. i. p. 128[1].

Hab. NICARAGUA, Chontales (*Belt, Janson*),—VENEZUELA[1].

3. **Zirophorus furcatus.** (Tab. XIX. fig. 4.)

Rufo-piceus, nitidus; capite cornubus duobus subdistantibus armato, mandibulis furcatis; elytris quinque-striatis.
Long. 7 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ moderately long, very sparingly setose; the fourth and one or two of the following joints a little incrassate. Mandibles elongate, divided in the middle; the upper branch elongate and slender, the lower branch thicker and also elongate and placed nearly at right angles to the upper. Thorax transversely subquadrate, canaliculate, impunctate. Elytra each with five impunctate striæ, and an extremely abbreviated sixth external stria. Hind body coarsely punctate, with a large smooth space on the middle of the posterior part of each segment.

This insect is only half the size of *Z. bicornis*, and is also quite distinct from that species by the structure of the mandibles; it is nearer to *Z. lacordairei*, but the latter is black, has the frontal horns more distinct, and the space between them more depressed, the upper branch of the mandible less elongate, and the hind body more punctate.

A series of eight examples was procured.

PIESTUS.

Piestus, Gravenhorst, Mon. Col. Micr. p. 223 (1806).
Piestus (pars), Erichson, Gen. et Spec. Staph. p. 830 (1840); Fauvel, Bull. Soc. Linn. Normand. ix. p. 22 (1865).

This genus is peculiar to the tropical regions of the New World; it contains, after the abstraction of the insects I refer to *Zirophorus*, about fifteen described species.

1. **Piestus niger.**

Piestus niger, Fauv. Bull. Soc. Linn. Normand. ix. p. 28, t. 1. f. 7[1]; Notices ent. ii. p. 24, t. 1. f. 7[2].

Hab. MEXICO (*Flohr*), Cordova (*Sallé*[1 2]), Jalapa, Tehuacan (*Höge*); GUATEMALA, near the city, Zapote (*Champion*); PANAMA, Volcan de Chiriqui below 4000 feet (*Champion*).

We have received a fair series of this species as well as of *P. minutus*, and though the two are extremely close in their characters, they appear to be constantly and really distinct*.

2. Piestus minutus.

Piestus minutus, Er. Gen. et Spec. Staph. p. 834[1]; Fauv. Bull. Soc. Linn. Normand. ix. p. 31[2]; Notices ent. ii. p. 27.

Hab. Mexico, Teapa[2]; British Honduras, R. Sarstoon, Belize (*Blancaneaux*); Guatemala (*Sallé*[2]), Cahabon, San Juan in Vera Paz, Zapote (*Champion*); Nicaragua (*Sallé and coll. Sharp*), Granada (*Pilate*[2]); Panama, Bugaba (*Champion*).—South America, Colombia[1 2] (*coll. Sharp*), Amazons.

Erichson's description[1] was no doubt taken from an immature example, as in all the specimens before me (except the var. from Parà and Ega recorded by me, Trans. Ent. Soc. Lond. 1876, p. 407), including those from Colombia, the head and thorax are black, and the elytra red as described by Fauvel[2].

3. Piestus extimus.

Depressus, nitidus, niger; antennis piceis, elytris pedibusque rufis; prothorace fortiter transverso, medio late punctato-sulcato, basi fortiter constricto; elytris quinque-striatis.

Long. 5 millim.

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

This species is distinguished from *P. minutus* and *P. pygmæus* by the existence of a punctate groove along the middle of the thorax, in place of a fine impunctate channel; in other respects it partakes of the characters of the two species: the thorax is broad, and much narrowed at the base as in *P. minutus*, but the head has not the transverse carina on the vertex, which is a constant character of *P. minutus*; the clypeal suture extends, however, nearer to the neck than it does in *P. pygmæus*, and the space between the extremity of the suture and the neck is more convex than in the last-named species; the thorax is almost impunctate, except in the median groove.

We have received only one example; this is no doubt a male, as it has antennæ similar to those of the same sex of *P. minutus*. Judging from the description of *P. buqueti*, Fauv., from Cayenne, our insect would appear to be nearest allied to that species, which, however, has a narrow and punctate thorax.

4. Piestus pygmæus.

Piestus pygmæus, Lap. Etud. ent. i. p. 130[1]; Er. Gen. et Spec. Staph. p. 835[2]; Fauv. Bull. Soc. Linn. Normand. ix. p. 33[3]; Notices ent. ii. p. 29.

* The Cuban *P. erythropus*, Er., is recorded by Fauvel (Bull. Soc. Linn. Normand. ix. p. 29; Notices ent. ii. p. 25) as a Mexican insect; but as Opelousas, where the example is said to have been obtained, is in Louisiana, I do not give the species a place in our list, though it is far more likely to occur in Mexico than in the United States.

Hab. Mexico (*Truqui*, *Flohr*), Cordova, Vera Cruz (*Sallé*), Teapa (*Pilate*[3], *Sallé*); British Honduras, Belize, R. Hondo (*Blancaneaux*); Guatemala (*Sallé*[3]), Zapote, Chacoj (*Champion*); Nicaragua, Granada[3] (*Sallé*), Chontales (*Janson*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).—Antilles, Guadeloupe[3].—South America[1 2 3] to Rio Janeiro.

5. **Piestus mexicanus.** (Tab. XIX. fig. 5.)

Piestus mexicanus, Lap. Etud. ent. p. 130[1]; Er. Gen. et Spec. Staph. p. 836[2]; Fauv. Bull. Soc. Linn. Normand. ix. p. 34, t. 4. f. 9[3].

Hab. Mexico[1 2] (*Lesueur*, *Sallé*[3]), Campeche[3] (*coll. Sharp*), Yucatan[3], Teapa (*Pilate*[3], *coll. Sharp*), Cordova (*Sallé*), Jalapa (*Flohr*, *Höge*), Tehuacan (*Höge*); Guatemala, near the city, Zapote, Balheu, Teleman (*Champion*); Panama, Bugaba, David (*Champion*).—Antilles, Santo Domingo (*coll. Sharp*).—Brazil, Santa Catarina[3].

This is either a very variable species, or there are more than one mixed under the name; from the material before me I must regard the former to be the case. The dozen examples from the State of Panama are only about half the size of the Mexican specimens, and have a very strongly transverse thorax. The greater number of examples—about two dozen—are from Mexico, and exhibit much variation in the punctuation of the thorax. The Guatemalan exponents do not agree either with those from Mexico or those from the State of Panama, and are remarkable from the deeper clypeal suture, and the greater convexity of the space it surrounds, as well as by the nearly complete absence of punctuation from the head. Erichson's type of the species, and I believe the example is also a type of Laporte's, is a large female, with the thorax much punctured; it came from Mexico.

6. **Piestus alternans.**

Depressus, dilute piceus; antennis pedibusque rufis; prothorace punctato, lateribus ultra medium obsolete unidenticulatis; elytris sulcatis.

Long. $4\frac{1}{2}$ millim.

Hab. Panama, David in Chiriqui (*Champion*).

Head obsoletely punctured, shining; clypeal suture deep. Thorax very strongly transverse; the sides rounded in front, constricted behind, and with a short obtuse tooth just before the constriction; the surface rather numerously punctured, and with a channel along the middle, and a very vague rugosely-punctate depression extending forwards from the front angle. Elytra short; each with four grooves: the sutural one broad, and followed by a broad interstice, then another broad groove (consisting in fact of two grooves, the interstice between being subobsolete), and external to this two narrower grooves and costæ. Hind body much punctured. Metasternum polished in the middle.

This insect is very similar to the smaller form of *P. mexicanus* found in the State of Panama; it is distinguished by the second elytral interstice being quite, the fourth

nearly, obsolete, while the third is, on the contrary, increased in width. We have received only one example, a male; it bears a few long hairs on the basal joint of the antennæ.

7. **Piestus chiriquensis.**

Nigro-piceus, opacus, rugoso-punctatus; elytris tenuiter sex-costatis; pedibus rufis; metasterno medio lævigato. Long. 5–6 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Head finely margined in front, densely rugose; clypeal suture fine, but definite. Thorax transverse, densely rugose, constricted behind, not canaliculate; with a vague depression on the middle and in front of each hind angle, and a denticle at the sides. Elytra rugose, each bearing seven fine longitudinal costæ, of which the second, fourth, and sixth are scarcely so distinct as the others. Hind body densely punctate. Metasternum polished in the middle.

The antennæ are very long in each sex, in the male remarkably so, and bear a few long hairs on the basal joint.

This insect much resembles the Amazonian *P. rugosus*, but that species has the metasternum punctate all over.

8. **Piestus costatus.**

Piceus, subopacus, rugosus; antennarum basi pedibusque rufis; elytris tenuiter sex-costatis, costis alternis subobsoletis; metasterno medio lævigato. Long. $4\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This insect is very similar to *P. chiriquensis*, but, besides being smaller and narrower, differs in the following particulars:—The antennæ are much shorter, the head is not margined in front, and the clypeal suture is very obsolete; the thorax is less transverse, and the denticle at the side is scarcely to be detected; the elytral costæ are less sharply elevated, and the second, fourth, and sixth, though distinct at the base, become quite obsolete behind. One female only has been found.

9. **Piestus angularis.**

Piestus angularis, Fauv. Bull. Soc. Linn. Normand. ix. p. 35, t. 1. f. 10^1; Notices ent. ii. p. 31, t. 1. f. 10^2.

Hab. Mexico, Cordova (*Sallé*).—Brazil, Santa Catarina [1] [2].

The only example I have seen is a very badly preserved one from Sallé's Mexican collection; it agrees with Fauvel's description and figure, but as it is from a very different locality, it may ultimately prove to be different. This specimen was labelled *P. angularis* by M. Sallé.

10. **Piestus crassicornis.** (Tab. XIX. fig. 6.)

Niger, opacus, dense punctatus, rugosus; prothorace lateribus obtuse tridentatis; antennis elongatis et crassis. Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Head densely rugose; clypeal suture fine and obsolete; antennary tubercles very elevated. Thorax greatly constricted behind; the sides much rounded and narrowed in front, and with three prominent but obtuse teeth about the middle; the surface densely and coarsely rugose, depressed laterally for nearly the whole length. Elytra each with, including the sutural elevation, seven fine raised costæ, the second, fourth, and sixth of which are more obsolete than the others. Hind body densely punctured.

Of this remarkable species we have received only one example. Although the antennæ are remarkably long and thick, the individual is probably a female; it agrees with *P. angularis* in possessing a coarsely punctate metasternum, but differs from that species by the thorax being less transverse, more narrowed, and rounded in front, and with larger and more prominent and more obtuse teeth, as well as in smaller details of colour and sculpture.

ANCÆUS.

Ancæus, Fauvel, Bull. Soc. Linn. Normand. ix. p. 60, t. 1. ff. 13–17 (1865); Notices ent. ii. p. 56.
Holotrochus (pars), Sharp, Tr. Ent. Soc. Lond. 1876, p. 387.

This genus was established for an insect from our region, and its author has since added to it a second species from New Guinea, and Leconte three others from North America. It is one of the numerous links between the "Piestini" and "Oxytelini" of Erichson: if the structure of the coxæ be taken as the point of distinction between the two groups, then the genus belongs to the latter near *Holotrochus*, from which it differs in the structure of the front of the head, in which latter respect it is nearer to *Lispinus*. *Holotrochus clavipes* and *H. fauveli*, Sharp, belong to *Ancæus*, as I anticipated would prove to be the case when I described them. Fauvel, though the author of the genus, appears to be very uncertain about its characters, as in his recent Notices ent. vii. p. 16, he refers *A. rufescens*, Lec., and the other two North-American species of *Ancæus* to *Lispinus*: there can be no doubt, however, that *A. rufescens* is an *Ancæus*; the other two North-American species are unknown to me.

1. **Ancæus crassicornis.** (Tab. XIX. fig. 7.)

Piceus, pedibus rufis; politus, lævigatus; prothorace quam latitudo breviore, lateribus basin versus fortiter angustatis sinuatisque, medio vix perspicue canaliculato; elytris quam prothorax multo longioribus. Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Cubilguitz 1000 feet (*Champion*).

Antennæ extremely stout, the eight terminal joints transverse. Mandibles very long,

more than half as long as the head. Head polished and shining, with two large feeble depressions in front. Thorax without punctuation, with a small depression at each hind angle.

This species is closely allied to *A. megacephalus*, but has longer mandibles, the surface of the head and other parts polished instead of being dull, the thorax shorter and broader and more sinuate at the sides, and the elytra longer. Only one example was procured.

2. Ancæus megacephalus.

Ancæus megacephalus, Fauv. Bull. Soc. Linn. Normand. ix. p. 61 [1]; Notices ent. ii. p. 57 [2].

Hab. Mexico, Teapa (*Pilate* [1 2]).

I have seen only one example, one of Fauvel's types from Chevrolat's collection; *A. clavipes*, Sharp, is very closely allied, but I have little doubt is distinct, the specific characters in this genus being very slight.

3. Ancæus porrectus.

Rufo-testaceus, sat nitidus, fere impunctatus; capite, prothorace elytrisque omnino subtilissime strigulosis; prothorace medio depresso, subtiliter canaliculato.
Long. $3\frac{3}{4}$ millim.

Hab. Guatemala, Panzos, and San Juan in Vera Paz (*Champion*).

Mandibles short. Antennæ with the two penultimate joints transverse, the three preceding joints smaller and slightly transverse. Head broad in front, rather deeply bi-impressed. Thorax about as long as broad, the sides a good deal narrowed and distinctly sinuate behind. Elytra a little longer than the thorax.

Very closely allied to *A. megacephalus*, but with the antennæ thinner; the thorax more narrowed behind, depressed along the middle, and the surface more finely strigose and therefore more shining. Two examples were obtained.

4. Ancæus minutus.

Piceus, sat nitidus; capite, prothorace elytrisque minutissime strigulosis; prothorace basin versus leviter angustato, ad angulos posteriores tantum obsolete impresso.
Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Panzos (*Champion*).

Mandibles porrect, moderately long. Antennæ very short, thick, only a little more slender at the base than at the extremity. Head large, rather deeply bi-impressed in front; eyes very small. Thorax about as broad as long, the sides not sinuate, the channel on the middle almost obliterated. Elytra but little longer than the thorax.

This insect is near *A. megacephalus*, but not half the size, the elytra shorter, and the fovea at the hind angle of the thorax scarcely to be detected. Unique.

5. Ancæus clavipes.

Holotrochus clavipes, Sharp, Trans. Ent. Soc. Lond. 1876, p. 391[1].

Hab. GUATEMALA, El Tumbador (*Champion*).—SOUTH AMERICA, Amazons valley[1].

6. Ancæus rufescens.

Lispinus rufescens, Lec. New Spec. N. Am. Col. p. 59 (1863)[1].
Lispinus exiguus, Fauv. (nec Er.) Bull. Soc. Linn. Normand. ix. p. 59[2]; Notices ent. ii. p. 55[3]; ibid. vii. p. 16[4].
Holotrochus fauveli, Sharp, Tr. Ent. Soc. Lond. 1876, p. 392[5].
Ancæus rufescens, Lec. Tr. Am. Ent. Soc. vi. p. 249[6].

Hab. NORTH AMERICA, Southern States[1 4 6].—MEXICO, Teapa (*Pilate*[2 3 4], *in coll. Chevrolat*); GUATEMALA, San Joaquin, El Reposo, Pantaleon, Zapote (*Champion*).—SOUTH AMERICA, Amazons valley[5].

If *L. rufescens*, Lec., be really *L. exiguus*, Fauv., there can be no doubt that it is an *Ancæus*, as recently stated by Leconte: Fauvel, however[4], denies this.

7. Ancæus politus.

Nitidus, rufo-testaceus, elytris versus apicem fuscis; prothorace basin versus fortiter sinuato, ad angulos posteriores profunde foveolato; oculis prominulis.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador (*Champion*).

Surface very shining. Mandibles short. Antennæ rather slender at the base; ninth joint much broader than the eighth, strongly transverse. Head rather short, feebly bi-impressed in front. Thorax broader than long, finely canaliculate along the middle, very shining. Elytra much longer than the thorax. Five examples.

LISPINUS.

Lispinus, Erichson, Gen. et Spec. Staph. p. 828 (1840); Fauvel, Bull. Soc. Linn. Normand. ix. p. 44 (1865); Notices ent. ii. p. 40.

This genus is widely distributed in the warmer regions of the world, and comprises about sixty described species.

1. Lispinus laticollis.

Lispinus laticollis, Er. Gen. et Spec. Staph. p. 828[1]; Chevr. & Fauv. Ann. Soc. Ent. Fr. 1863, p. 442[2]; Fauv. Bull. Soc. Linn. Normand. ix. p. 49[3]; Notices ent. ii. p. 45[4].

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—ANTILLES, Cuba[1 2 3 4].

2. Lispinus quadripunctulus.

Lispinus quadripunctulus, Fauv. Bull. Soc. Linn. Normand. ix. p. 49[1]; Notices ent. ii. p. 45[2].

Hab. MEXICO, Cordova (*Höge*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet, San Miguel in the Pearl Islands (*Champion*).—COLOMBIA (*coll. Chevrolat*); VENEZUELA, Caracas [1] [2].

3. Lispinus striola.

Lispinus striola, Er. Gen. et Spec. Staph. p. 829 [1]; Chevr. & Fauv. Ann. Soc. Ent. Fr. 1863, p. 442 [2]; Fauv. Notices ent. ii. p. 46 [3].

Hab. MEXICO [2], Teapa [1] (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS, Belize, R. Hondo, R. Sarstoon (*Blancaneaux*); GUATEMALA, El Tumbador, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*), Granada (*Sallé*).—ANTILLES, Cuba [1] [2] [3].—SOUTH AMERICA [2], Colombia to Rio Janeiro.

4. Lispinus catena.

Lispinus catena, Sharp, Tr. Ent. Soc. Lond. 1876, p. 412 [1].

Hab. NICARAGUA, Chontales (*Janson*).—SOUTH AMERICA, Amazons valley [1].

The only evidence of the existence of this species in our region is an example I received many years ago from Chontales; it has not been remounted, and I have no doubt the locality is correct.

5. Lispinus tardus.

Angustulus, subparallelus, sat nitidus, niger; antennis rufis, pedibus piceis; prothorace subquadrato, crebre fortiter punctato, utrinque longius profunde impresso, basin versus perparum angustato; elytris quam prothorax longioribus, crebre subtiliter strigulosis, minus nitidis, sat crebre et fortiter punctatis.

Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

An obscure species of which we have received only examples in a bad state of preservation; it is apparently about equally allied to *L. striola* and *L. quadripunctulus*, but is narrower than either of those species, and the sculpture of the hind body does not consist of obsolete oblique grooves, but of an obsolete punctuation; the punctures of the head, thorax and elytra are more numerous and rather more coarse than in either of the two species mentioned. The structure of the antennæ is more like that of *L. quadripunctulus* than that of *L. striola*; the hind body is less setose than in *L. quadripunctulus*, but this may be due to the decayed condition of the examples.

6. Lispinus granadensis.

Lispinus granadensis, Fauv. Bull. Soc. Linn. Normand. ix. p. 52 [1]; Notices ent. ii. p. 48 [2].

Hab. MEXICO (*Truqui*), Cordova (*Sallé*), Jalapa (*Höge*); GUATEMALA, Cerro Zunil, near the city, Aceytuno, Zapote, Capetillo, San Gerónimo, Balheu (*Champion*); NICARAGUA, Chontales (*Janson*), Granada [1] [2] (*Sallé*).

Var. minor, magis nitidus, paullo subtilius punctatus.

Lispinus insularis, Chevr. & Fauv. Ann. Soc. Ent. Fr. 1863, p. 442 [3]; Notices ent. ii. p. 49 [4].

Hab. MEXICO (*Truqui* [3 4]); GUATEMALA, Zapote (*Champion*).—ANTILLES, Santo Domingo [3 4], Cuba [3 4].

I think it more than probable that *L. insularis* is only a small form of *L. granadensis*, though I have only seen one exponent, and that a not very satisfactory one, from our region; the larger form appears to be the least rare of our *Lispini*.

7. **Lispinus planus.**

Lispinus linearis, Fauv. (nec Er.), Bull. Soc. Linn. Normand. ix. p. 51 [1]; Notices ent. ii. p. 47 [2].
Lispinus planus, Sharp, Trans. Ent. Soc. Lond. 1876, p. 416 [3].

Hab. MEXICO, Teapa (*Pilate* [1 2]).—SOUTH AMERICA, Colombia [1 2], Amazons valley [3].

A single example—one of Fauvel's types—is all I have seen from our region, and it is apparently conspecific with Amazonian specimens. In 'Notices ent.' vii. p. 13, Fauvel refers Leconte's *L. obscurus* to this species as a synonym, but from the remarks he makes it is probable it may be distinct.

8. **Lispinus anguinus.**

Lispinus anguinus, Fauv. Bull. Soc. Linn. Normand. ix. p. 54 [1]; Notices ent. ii. p. 50 [2].

Hab. MEXICO, Teapa (*Pilate* [1 2]).—ANTILLES, Santo Domingo (*Sallé* [1 2]).

I have seen no example from our region of this distinct species.

9. **Lispinus fauveli.**

Lispinus tenellus, Chevr. & Fauv. (nec Er.), Ann. Soc. Ent. Fr. 1863, p. 443 [1]; Fauv. Notices ent. ii. p. 53 [2].

Depressus, subnitidus, nigricans; prothorace, elytris antennisque piceis, harum basi pedibusque testaceis; abdominis apice rufescente; parcius omnino subtilissime punctulatus.
Long. 3 millim.

Hab. MEXICO [1 2], Teapa (*Pilate, in coll. Chevrolat*), Cordova (*Sallé*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, near the city, Zapote, El Tumbador (*Champion*).—COLOMBIA [1 2].—ANTILLES, Cuba [1 2].

I do not think it at all probable that this insect is the species described by Erichson under the name of *L. tenellus*, and I therefore give it a new name. We have received altogether nearly two dozen examples of this insect, representing four races or possibly distinct species.

10. **Lispinus sculpturatus.**

Depressus, niger, fere opacus; antennarum basi pedibusque rufis; dense subtiliter strigulosus; prothorace fortiter punctato.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*).

This insect is larger than *L. fauveli*, with the surface more coarsely strigose and therefore more opaque, and it has also a coarse, rather scanty punctuation on the thorax; the head is rather long and narrow, and the eyes more distant from the front margin of the thorax; the four impressions at the base of the thorax are more distinct than in the allied species, the two near the middle being especially less obsolete. Seven examples.

11. **Lispinus dejectus.**

Angustior, depressus, niger, opacus; antennarum basi pedibusque rufis; dense subtiliter strigulosus; prothorace obsolete punctato.
Long. 3 millim.

Hab. GUATEMALA, Purula, San Gerónimo, Zapote (*Champion*).

This obscure little *Lispinus* has the minute sculpture of the surface more distinct than in any of the allied species, and is correlatively less shining; the minute sculpture is distinct even on the hind body, the form is very slender, and the thoracic punctuation is both fine and obsolete. These characters will enable the insect to be recognized from *L. fauveli* and *L. sculpturatus*, to each of which it is closely allied. We have received five examples, all unfortunately in bad condition.

12. **Lispinus flavipennis.**

Lispinus flavipennis, Fauv. Bull. Soc. Linn. Normand. ix. p. 58 [1]; Notices ent. ii. p. 54 [2].
Lispinus tenellus (pars), Fauv. Notices ent. vii. p. 15 [3].

Hab. MEXICO, Teapa (*Pilate* [1] [2], *in coll. Chevrolat*).—SOUTH AMERICA, Caracas [1] [2].

I cannot adopt Fauvel's recently expressed opinion [3] that this is merely a synonym of our *L. fauveli* (*L. tenellus*, Fauv., nec Er.). Although it is a fact that the species of this group of *Lispinus* are most closely allied and very difficult to distinguish by conspicuous characters, yet this latter remark is equally true of most of the other 'Piestina,' though experience shows the slight differences to be constant; as an instance I may allude to *Piestus minutus* and *P. pygmæus*, which, though varying considerably and inhabiting frequently the same localities and distributed over a large part of the New World, remain distinct though extremely similar externally.

13. **Lispinus bicolor.**

Angustus, depressus, nigricans; prothorace elytrisque rufis; antennis pedibusque testaceis; densius subtilius strigulosus, subnitidus; prothorace crebre punctato.
Long. $2\frac{1}{2}$ millim.

Hab. BRITISH HONDURAS, Belize, R. Hondo (*Blancaneaux*); GUATEMALA, El Reposo, Cubilguitz (*Champion*).

This species is rather larger than *L. flavipennis* and has the thorax distinctly punctate and with a slender smooth space along the middle; it is equally close to *L. fauveli*, but is narrower, and has the thorax and elytra red, the former more distinctly punctate, the latter rather shorter. Eight examples.

14. **Lispinus brevicollis.**

Lispinus brevicollis, Fauv. Bull. Soc. Linn. Normand. ix. p. 56[1]; Notices ent. ii. p. 52[2].

Hab. MEXICO, Teapa[1 2], Cordova (*Sallé*); GUATEMALA, near the city, El Jicaro, Cubilguitz, Cahabon (*Champion*); NICARAGUA, Granada (*Sallé*).

Of this rare species we have only single examples from each locality.

15. **Lispinus longicornis.** (Tab. XIX. fig. 8.)

Rufus, depressus, pernitidus; antennis quam corpus vix brevioribus; parce punctatus; prothorace breve, basi utrinque longitudinaliter minus profunde impresso.
Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This insect is similar in form to *L. brevicollis*, but is distinguished not only by the very elongate antennæ but also by the very minute prosternal process separating the front coxæ. The head is broad and short, not margined in front; with prominent eyes, and very distinct widely distant antennal tubercles; sparingly punctate, and without foveæ. Thorax strongly transverse, a little narrower at the base, coarsely and rather irregularly punctate; not canaliculate, but with a narrow smooth space along the middle. Elytra very sparingly and obsoletely punctate, much longer than the thorax. Hind body also with a very minute almost invisible coriaceous sculpture. Unique.

16. **Lispinus planellus.** (Tab. XIX. fig. 9.)

Depressus, rufo-testaceus, lævigatus, nitidissimus; prothorace ad basin constricto.
Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ short, moderately stout, piceous; joints 6–10 each shorter than long. Head short and broad, not margined, bi-impressed in front; antennary tubercles present, but flattened and broad. Thorax broader than long, flat; sides much rounded, narrowed and sinuate behind, and depressed close to the hind angles; with a very fine short channel along the middle, and the surface, though very polished, bearing a few very fine punctures. Elytra much longer than the thorax, polished and shining, with a single puncture on the disc of each.

This is an anomalous species, presenting to a great extent the appearance of an *Ancœus*; the front coxæ, however, are not at all prominent and the prosternum is developed into a very delicate process extending under and between them. We have received only one example.

GLYPTOMA.

Glyptoma (pars), Erichson, Gen. et Spec. Staph. p. 908 (1840) [1]; Motschulsky, Etudes ent. viii. p. 67 (1859) [2].

This genus was confounded by Erichson [1] and other writers with *Thoracophorus*, Motsch.; Erichson refused to accept the latter name and proposed *Glyptoma* for the combination. Motschulsky [2] pointed out Erichson's double error and corrected it by adopting the name *Glyptoma* for the species not belonging to *Thoracophorus*, Motsch. This course seems quite satisfactory and I now adopt it. In *Glyptoma* the anterior coxæ are separated by a process of the prosternum, as in *Lispinus*, and the two genera should be placed in proximity, *Glyptoma* being distinguished by the abruptly constricted neck of the head and by its peculiar antennæ. The genus is confined to Tropical America and consists of three previously described species, viz. *G. crassicorne*, Er., *G. punctatoplicatum*, Solsky, and *G.* (*Thoracophorus*) *opacum*, Sharp, and the five new ones from Central America here recorded.

1. **Glyptoma læviceps.** (Tab. XIX. fig. 10.)

Nigrum, pedibus rufis, opacum; capite convexo, lævigato, nitido; prothorace anterius in medio sulcato; elytris bicostatis; abdomine basi vage sculpturato, apice lævigato.
Long. 4 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ elongate, densely setose; penultimate joint slightly longer than broad. Head intensely black, polished and unsculptured. Thorax with a broad short groove on the middle in front, the space outside this vaguely rugose. Elytra considerably longer and broader than the thorax; with a strongly raised curved costa on the middle of each, and a second rather less conspicuous one externally; the surface dull, with some vague depressions. Upper surface of the hind body with some vague depressions and sculpture on the basal segments, the apical segments unsculptured and rather shining; under surface vaguely sculptured, the sculpture gradually more obsolete from the base to the apex.

Two examples were procured under bark saturated with sap. The species is very distinct on account of its polished and shining head.

2. **Glyptoma longipes.**

Nigerrimum, pedibus piceis, opacum; capite medio lævigato; prothorace anterius in medio sulcato; elytris unicostatis; abdomine basi vage sculpturato, apice lævigato.
Long. $4\frac{1}{8}$ millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ very elongate, moderately setose; penultimate joint longer than broad. Head shining in front and along the middle, opaque on each side. Thorax coarsely

and deeply sculptured, with a broad groove along the middle in front. Elytra elongate, quite black, dull, with a conspicuous raised costa along the middle of each, sparingly and coarsely punctured. Hind body with the apical segments shining and obsoletely sculptured; basal segment dull, with some large depressions. Unique.

3. **Glyptoma cribellum.**

Piceum, opacum; capite nigricante undique fortiter punctato; abdomine æqualiter, densissime, fortissime profundeque punctato.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador, Zapote, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Antennæ rather short, sparingly setose; joints 2–10 differing little from one another, strongly transverse. Head black, closely and deeply punctured, slightly shining. Thorax rugose, without depressions or channel. Elytra longer than the thorax, longitudinally rugose, with a well-marked costa along the middle of each. Hind body above and below, together with the breast, remarkably densely, deeply, and coarsely punctate-rugose; terminal segment very setose.

Of this species, so very distinct by the sculpture, Mr. Champion obtained a dozen examples at El Tumbador, and one each from the other localities; I regret to say that I lost the unique Panama exponent after determining it.

4. **Glyptoma hirticorne.** (Tab. XIX. fig. 11.)

Piceum, elytris rufescentibus, subnitidum; capite nigricante, polito, parce punctato; prothorace parvo, inæquali; elytris unicostatis; abdomine grosse punctato; antennis brevibus, medio dense pubescentibus.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ short; joints 2–10 strongly transverse, 3–6 densely, the others more sparingly, pubescent. Head with only a few distant fine punctures. Thorax narrower than the head, rounded in front, greatly narrowed behind, with two very large punctiform depressions in front of the base, and with some other large irregular punctures. Elytra elongate, red, rather shining, with a few coarse punctures, and along the middle of each an acutely raised costa. Hind body very coarsely sculptured, the sculpture consisting of irregular punctiform depressions which are coarser and deeper at the base of each segment. Five specimens.

5. **Glyptoma cognatum.**

Rufulum, sat nitidum; capite nigricante, polito, parce punctato; prothorace parvo, inæquali; elytris unicostatis; abdomine grosse punctato; antennis brevibus.
Long. $2\frac{1}{8}$ millim.

Hab. GUATEMALA, El Reposo (*Champion*).

This species is readily distinguished from *G. hirticorne* by the absence of the thick pubescence seen on the antennæ of that species; it is also slightly smaller and rather more depressed in form, and the sculpture is less deep, though of an exactly similar character. Five examples.

ANEUCAMPTUS.

Corpus subcylindricum, rude sculpturatum. Antennæ clavatæ. Palpi maxillares articulo ultimo valde elongato, quam præcedens quadruplo longiore. Coxæ anteriores distantes, haud prominulæ.

Thoracophorus excisicollis, Motsch., forms an isolated genus and has a remarkable structure of the maxillary palpi. In these organs I am unable to see the basal joint, but no doubt it is very small as in all the allied genera; the second joint is thick, about as long as broad at its apex, the apex quite truncate, the base being more slender; the third joint is stout, but not quite so broad as that preceding it, short, not so long as broad; the terminal joint very elongate, more than twice as long as the preceding two joints together, a little more slender at the extremity, the latter apparently bearing a minute articulated supplementary appendage. Mandibles small, scarcely projecting beyond the front of the head. Antennæ 11-jointed; the basal joint large and very conspicuous, the terminal joints thicker than the intermediate ones. Front coxæ minute, globose, not widely separated, not extending in the transverse direction; placed far from the sides of the thorax, which form no projection behind them. Middle coxæ slightly separated. Tibiæ slender and elongate; tarsi very short, apparently 4-jointed—three short basal joints and a long terminal one. Hind body not margined.

1. **Aneucamptus excisicollis.** (Tab. XIX. fig. 12.)

Thoracophorus excisicollis, Motsch. Etudes ent. viii. p. 68 (1859) [1].

Hab. Panama [1], Volcan de Chiriqui 2000 to 4000 feet, David (*Champion*).

THORACOPHORUS.

Thoraxophorus (err. typ.), Motschulsky, Bull. Mosc. x. 5, p. 98 (1837).
Thoracophorus, Motschulsky, Bull. Mosc. xiii. p. 197 (1840); Etudes ent. viii. p. 66 (1859).
Glyptoma (pars), Erichson, Gen. et Spec. Staph. p. 908 (1840).

Thoracophorus includes about ten species from South America, two from North America, and also two or three from the East Indies and the Malay archipelago.

1. **Thoracophorus sallæi.** (Tab. XIX. fig. 13.)

Fusco-ferrugineus; capite fusco, antennis pedibusque ferrugineis; prothorace minus regulariter costato, basi constricto; elytris regulariter costatis; abdomine alte multicostato.
Long. $2\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, El Tumbador, Cerro Zunil, Capetillo, Tamahu, Balheu, Cubilguitz (*Champion*).

Head rather strongly produced in the middle, the hind angles slightly obtuse; the vertex with two rather strong carinæ, and a longer but less elevated carina between these and the outside. Thorax broader than long, greatly constricted behind the middle; with two basal carinæ near the middle extending only half of the length towards the front, and between these and the sides an elongate carina furcate in front. Elytra much longer than the thorax, each with three strongly elevated carinæ. Hind body with a series of seven sharply elevated carinæ; the latter appearing continuous when the segments are contracted, but when they are extended it is seen that the carinæ do not extend to the base of each segment, but that this part is occupied by a series of fine crenulations.

This species was labelled *Glyptoma sallæi*, Fauv., in Sallé's collection, and I have preserved this specific name; it is very distinct on account of its costate hind body. We have received twelve examples; the one from Cubilguitz is a variety of small size, with the sculpture of the thorax less coarse.

2. Thoracophorus brevicristatus.

Glyptoma brevicristatum, Horn, Tr. Am. Ent. Soc. 1871, p. 332[1].

Thoracophorus brevicristatus, Fauv. Notices ent. vii. p. 12[2].

Hab. North America [1], Arizona [2].—Mexico, Teapa [2].

I have not seen any example of this species.

3. Thoracophorus truquii.

Ferrugineus, opacus, minus sculpturatus; prothorace quadrato, medio costis duabus distantibus munito; elytris tenuiter sexcostatis; abdomine fere esculpturato.

Long. $2\frac{1}{2}$ millim.

Hab. Mexico (*Truqui, Sallé, and coll. Sharp*).

Head very short and broad, only slightly rounded in front, the disc with two short longitudinal elevations, the antennal tubercles strongly elevated. Thorax transversely quadrate, quite straight in front; the sides crenulate and quite straight nearly to the base, then a little narrowed; hind angles rectangular; on the middle are two costæ, and near each side a finer one, the costæ widely separated and the space between them uneven though not sculptured. Elytra slightly longer than the thorax; finely and regularly costate, otherwise not sculptured, dull. Hind body very feebly sculptured at the base only, the apex slightly shining.

Of this species I have seen only the two examples collected by Truqui; I have retained the name proposed for it in Sallé's collection.

4. **Thoracophorus æqualis.**

Peropacus, rufo-niger; antennis pedibusque rufis; prothorace obsolete costato; elytris regulariter costatis, interstitiis abdomineque esculpturatis.
Long. $2\frac{1}{8}$ millim.

Hab. GUATEMALA, San Gerónimo, Balheu (*Champion*).

Head with a well-marked carina close to the eye and continuous with the anterior margin, and also with two short elevations on the vertex, otherwise flat. Thorax a good deal broader than long, the costæ and depressions obsolete; hind angles obtuse. Elytra nearly twice as long as the thorax; each with three very distinct regular carinæ, but with no sculpture or trace of other carinæ between them. Hind body quite destitute of sculpture.

Closely allied to *T. ruficollis*, but larger and with considerably longer elytra. Four examples.

5. **Thoracophorus ruficollis.**

Glyptoma ruficolle, Fauv. Bull. Soc. Linn. Normand. ix. p. 65[1]; Notices ent. ii. p. 61[2].

Hab. MEXICO, Teapa (*Pilate* [1] [2]), Cordova (*Sallé*); GUATEMALA, Cubilguitz, Senahu, Capetillo (*Champion*).

6. **Thoracophorus discretus.** (Tab. XIX. fig. 14.)

Rufo-niger, peropacus; antennis pedibusque rufis; prothorace elytrisque obsolete costatis, illo vix transverso; abdomine esculpturato, brevissime setuloso.
Long. $1\frac{5}{8}$ millim.

Hab. GUATEMALA, El Tumbador (*Champion*); PANAMA, Bugaba (*Champion*).

Antennæ rather large, much thicker externally. Head rather small; hind angles minutely denticulate immediately behind the eyes; the vertex obscurely bicarinate, the juxta-ocular carina distinct. Thorax rather broader than long, the surface uneven and with some obscure elevations but without definite carinæ. Elytra a little longer than the thorax; tricostate, with an additional more obsolete carina between the first and second elevations. Hind body dull and rather rough; without definite sculpture, but sprinkled with very minute and short setæ.

This species is allied to *T. ruficollis*, but is smaller and more depressed, has a longer thorax and shorter head and elytra, and slightly different sculpture.

7. **Thoracophorus pusillus.**

Subdepressus, opacus, fusco-ferrugineus; antennis, prothorace pedibusque rufis; prothorace elytrisque minus argute costatis, illo brevi.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Teleman (*Champion*).

This insect is closely allied to *T. ruficollis*, but only half the size, has a considerably

shorter thorax, and the elevations on the thorax and elytra not so conspicuous; there is no trace of an additional carina between the inner two elevations on the elytra; the hind body has neither sculpture nor setæ.

8. **Thoracophorus pallidus.**

Testaceo-ferrugineus, opacus; antennis tenuibus; prothorace elytrisque costatis, illo fortiter transverso.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Differs from *T. pusillus* not only in its smaller size and pallid colour (this may be due to immaturity), but also by its more slender antennæ, smaller eyes, and by the more distinct, though fine, costæ on the thorax and elytra. The head is most minutely denticulate at the hind angles. The thorax has the surface uneven, and a fine carina halfway between the middle and each side. The elytra are considerably longer than the thorax, each bearing three fine costæ, but there is no other sculpture. Hind body without sculpture. One example only.

9. **Thoracophorus filum.**

Angustior, fere depressus, rufescens, opacus; capite nigricante; prothorace elytrisque vix costatis, illo haud transverso, inæquali.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador, El Reposo, Zapote (*Champion*).

This species is very closely allied to *T. pusillus*, but is much narrower and more depressed and has an elongate thorax. The antennæ are short, strongly thickened externally. The head is only a little constricted behind the eyes, the hind angles obtuse, the carinæ quite obsolete. The thorax is a little broader than long, without carinæ, but the surface is uneven and has a large depression on the middle. The elytra are a good deal longer than the thorax, indistinctly tricostate. The hind body is without sculpture.

Group **ELEUSININA.**

It will facilitate the classification of the "Oxytelinæ" if these insects be treated as a separate group, defined by the small, globose front coxæ, whose acetabula are widely open behind, while their external prolongation is closed by the trochantin, which latter has the appearance of a supernumerary piece of the sternum.

ELEUSIS.

Eleusis, Laporte, Etud. ent. p. 131 (1835); Fauvel, Ann. Mus. Genov. xii. p. 206; Notices ent. vii. p. 17.

Isomalus, Erichson, Gen. et Spec. Staph. p. 838 (1840); Fauvel, Bull. Soc. Linn. Normand. ix. p. 35; Notices ent. ii. p. 31.

This genus as at present limited is a widely distributed one, and possesses represen-

tatives in the tropics of both hemispheres, as well as one or two in the United States of North America.

Eleusis is a very distinct genus, though its characters have been only very incompletely exposed. The front coxæ are extremely short, and the thoracic pieces adjoining them exhibit a very peculiar structure: the side-piece forms only a short obtuse projection behind the coxa, but in front of it there is an additional piece, which from its position makes the lateral portion of the coxa appear very largely exposed and visible. I expect it will prove that this peculiar piece is really the trochantin that has become enlarged, and attached to the prosternum in such a manner as to form part of the outer skeleton of the insect.

§ 1. *Elytris bipunctatis* (*singulo in disco puncto subtili impresso*).

1. **Eleusis bicolor.**

Isomalus bicolor, Er. Gen. et Spec. Staph. p. 839[1]; Fauv. Bull. Soc. Linn. Normand. ix. p. 38[2]; Notices ent. ii. p. 34[3].

Hab. Mexico [1 2 3], Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Senahu, Purula, Sabo, San Joaquin, Balheu (*Champion*).

Var. *divisa*. Elytris dimidio basali testaceo. (Tab. XIX. fig. 16.)

Hab. Guatemala, Cerro Zunil, Zapote, Senahu, San Gerónimo (*Champion*).

We figure an example of the variety *divisa*; it is apparently commoner in Guatemala than the typical form; intermediate examples occur but rarely. Fauvel states that the female has the head suborbiculate, but this is not the case; some examples are only half the size of others, and these have perhaps a rather smaller head than is due merely to diminution of general stature, but the head is always straight at the sides and suboblong in shape.

2. **Eleusis rufula.**

Rufo-testacea; elytris versus apicem fuscis; capite oblongo, subtiliter strigoso, inter antennas punctis majoribus obsoletis impressis.

Long. $4\frac{1}{2}$–5 millim.

Hab. Panama, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This species is very closely allied to *E. bicolor*, but, besides being only half the size, has the head and thorax red, the sculpture much finer, and the elytra a little shorter. The vertex has an obsolete fovea. The thorax is about as long as broad; it has a well-marked depression on the front margin on each side; and the sides are straight to behind the middle, thence much narrowed to the base. The elytra are very densely and finely strigose. The surface is very shining, and has no distinct punctures except those near the front of the head between the antennæ. Five examples.

3. **Eleusis fenestrata.**

Nigra; antennis pedibusque piceis, tibiis tarsisque testaceis; elytro singulo plaga magna testacea; dense strigosula; capite oblongo, parce obsoleteque punctato.
Long. 5 millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

Similar in size and form to *E. rufula*, but differing from it in colour, and the much greater development of the strigose sculpture on the head, thorax, and elytra. As in *E. rufula* the head has an obsolete fovea on the vertex, and the thorax is also similar in form and has similar impressions on the front margin. Each of the wing-cases has a large pallid mark occupying the greater part of the surface, but leaving a black patch round the scutellum; the suture also is dark, and the hind margin broadly so.

4. **Eleusis pallidipennis.**

Isomalus pallidipennis, Fauv. Bull. Soc. Linn. Normand. ix. p. 40[1]; Notices ent. ii. p. 36[2].
Isomalus tenuis, Fauv. Bull. Soc. Linn. Normand. ix. p. 41[3]; Notices ent. ii. p. 37[4]; Sharp, Tr. Ent. Soc. Lond. 1876, p. 411[5].

Hab. Mexico, Campeche (*Sallé*), Teapa (*Pilate*[1 2]); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, El Reposo, Zapote, Chacoj (*Champion*).—South America, Caracas[1 2 3], Amazons valley[4 5], &c.

This species varies in size, and in the colour of the legs and antennæ, and I have no doubt *Isomalus tenuis* was founded on a very small example with these organs pallid; I have examples agreeing with Fauvel's description before me from both Guatemala and the Amazons valley. In his recent 'Notices ent.' vii. p. 17, Fauvel adopts the name *E. fasciata* for our insect, considering it to be the same as *Isomalus fasciatus*, Lec. I am not acquainted with the North-American insect, but as the descriptions are far from conveying to my mind the impression that this identification is correct, I do not adopt it at present.

5. **Eleusis corvina.** (Tab. XIX. fig. 17.)

Nigra; antennis, tibiis tarsisque fusco-testaceis, elytris testaceo-plagiatis; omnino subtilissime strigosa, fere impunctata; prothorace angusto.
Long. 4 millim.

Hab. Guatemala, Senahu (*Champion*).

This insect is very closely allied to the form of *E. pallidipennis* with dark femora and antennæ, but readily distinguished by the elytra being broadly black at the base as well as at the apex; in this latter respect it resembles *E. fenestrata*, from which it is well distinguished by the quite different strigosity of the surface and by the deep gular suture. The head is suboblong, with a few distant very fine punctures which are not more conspicuous between the antennæ than elsewhere. The thorax is about as long as broad, the sides simply rounded from the front angles to the base, the front margin

bipunctate on each side. The hind body is quite black, the apex not at all more dilute.

6. **Eleusis flavipennis.**

Angustior, nigro-picea; antennarum basi pedibusque testaceis; elytris pallide flavis.
Long. vix 3 millim.

Hab. GUATEMALA, Purula (*Champion*).

This insect differs from the smaller, narrow examples of *E. pallidipennis* in possessing longer, as well as unicolorous elytra. In other respects quite similar to that species. Unique.

7. **Eleusis infima.**

Nigro-picea; antennis pedibusque rufis; omnino subtilissime strigosa, fere impunctata.
Long. 5 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Extremely similar to *E. interrupta*, Er., but twice as large, considerably broader, and with a transverse thorax. The antennæ are elongate. The head is rather short and broad, and intermediate in shape between that of *E. bicolor* and that of the species of the following group. The thorax is short and broad, very greatly narrowed behind; bipunctate on each side on the anterior margin, with two large punctures at each side near the middle, and the outline of the side interrupted or emarginate between these. Elytra unicolorous, piceous, but more dilute than the head and thorax.

§ 2. *Elytris quadripunctatis.*

8. **Eleusis breviceps.**

Nigro-picea; tibiis tarsisque et abdomine versus apicem rufescentibus; capite transversim suborbiculato, subtilissime punctulato.
Long. 4 millim.

Hab. GUATEMALA, Senahu 2500 feet (*Champion*).

Antennæ rather short. Head moderately shining, sparingly and very finely punctate. Thorax short, bipunctate on the anterior margin; the surface extremely feebly, obliquely, longitudinally depressed on each side, the middle with a fine, short channel.

Similar to *E. infima*, though readily distinguished by the quadripunctate elytra and the shorter head. Only two examples were obtained.

9. **Eleusis scita.** (Tab. XIX. fig. 18.)

Rufo-testacea; capite, prothorace elytrorumque apice nigris; antennis fuscis, basi testacea; nitida, fere impunctata.
Long. 4–5 millim.

Hab. GUATEMALA, near the city, Capetillo, Zapote, Cerro Zunil (*Champion*).

This species has a very broad head, and the groove near the eye is very deep and distinct and rather strongly curved. It differs greatly in colour from *E. breviceps*, but the sculpture and other details are nearly identical.

10. **Eleusis mixta.**

Capite, prothorace pectoreque nigris; elytris flavis, apice fusco; antennis femoribusque fuscis, tibiis tarsisque testaceis, abdomine fusco-testaceo; nitida, capite crebre punctato.
Long. 4 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cerro Zunil, San Gerónimo, Purula (*Champion*).

Differs from *E. scita* in the more obscure colour, and in the distinct punctuation of the head; the elytra are indefinitely infuscate behind; and the hind body, though of a yellowish colour, is always more or less infuscate along the middle.

11. **Eleusis insignis.** (Tab. XIX. fig. 19.)

Nigra; antennis, pedibus abdomineque rufis, hoc medio fusco; elytris flavis, sutura apiceque fuscis; capite latiore, fortiter punctato.
Long. $5\frac{1}{2}$ millim.

Hab. Guatemala, Quiche Mountains 7000 to 9000 feet (*Champion*).

Head short, very broad; surface uneven, coarsely punctate; the juxta-ocular groove very broad, rather indefinite. Thorax broad, greatly narrowed behind, denticulate at the side behind the middle; the surface rather uneven, canaliculate on the disc, and with rather numerous large punctures. Elytra very finely punctulate. One example.

EUMALUS.

Corpus depressum, elongatum. Prosternum valde elongatum. Abdomen tenuissime, vix perspicue, marginatum.

This genus must certainly be placed next to *Eleusis*, though it is distinguished by numerous characters. The prosternum is extremely elongate, the supernumerary piece or trochantin extending far forward and uniting with the prosternum by a very visible suture; this piece is somewhat depressed so as to form an imperfect groove for the reception of the femur, where the leg is flexed on the prosternum. The head has well-marked antennary tubercles, and the front margin of the pronotum is tuberculate. The mandibles, though small, are prominent like those of *Eleusis*. The maxillary palpi are similar to those of *Eleusis*, except that they are shorter, with the penultimate joint rather thicker, and the terminal joint rather smaller. The front coxæ are small and subglobular, and not exserted, and situated quite at the back of the elongate prosternum. The tarsi are 5-jointed, the four basal joints quite small and together not quite equal in length to the terminal joint.

The peculiar development of the trochantin I have described in connection with

Eleusis is here presented in a still more conspicuous manner. I am not acquainted with any species of the genus other than the two here described, but it is probable that the North-American *Isomalus nigrellus*, Lec., belongs to it.

1. **Eumalus strigosus.** (Tab. XIX. fig. 20.)

Elongatus, niger; antennarum basi, pedibus elytrorumque apice rufis; strigosus, haud punctatus.
Long. 4 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ with the three basal joints red, the third joint rather shorter than the second. Head with a longitudinal elevation on either side in continuation with the antennary tubercles. Thorax elongate, much narrowed behind, canaliculate along the middle; with four elevations on the front margin, the outer elevation being more elongate than the others. Elytra elongate; quite impunctate, but delicately strigose. Fourteen examples, exhibiting no variation.

2. **Eumalus nigriceps.** (Tab. XIX. fig. 21.)

Rufo-testaceus; capite nigro, abdomine nigro-fusco; subtiliter strigosus, haud punctatus.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ yellow, short, scarcely thicker externally; third joint rather smaller than the second. Head narrow, longitudinally bi-impressed. Thorax longer than broad, finely canaliculate along the middle, feebly plico-tuberculate on the front margin; delicately strigose, without punctures. Elytra elongate and narrow, delicately strigose, without any punctures. Five examples.

Group **LEPTOCHIRINA.**

The genus *Leptochirus* and its allies having the anterior acetabula closed behind by the junction of the prothoracic side-pieces with a process of the prosternum, they must be separated into a distinct group. The separation of this group and the "Eleusinina" from the "Piestina" will be found greatly to facilitate an improved arrangement of the "Oxytelina" and "Piestina."

LEPTOCHIRUS.

Leptochirus, Germar, Ins. spec. nov. p. 35 (1824); Erichson, Gen. et Spec. Staph. p. 824 (1840).

This genus, after the abstraction of *Priochirus*, will be defined by the existence of a conspicuous prosternal process behind the anterior coxæ, and by the apices of the coxæ not being exserted. It will comprise all the New-World species of *Leptochirus* hitherto described, except *L. bicornis*, and will also include for the present two or three species of the eastern hemisphere, viz. *L. laticeps*, Er., *L. quadridens*, Motsch., and *L. idæ*, Kr.

The New-World species of the genus are greatly in need of a thorough revision; the

allies of *L. scoriaceus*, Germ., forming a very difficult and intricate study; the peculiar mandibles have hitherto been neglected, but their structure evidently offers specific differences, though the appreciation of them is rendered difficult by the existence of individuals of imperfect development, as in the analogous case of the family Lucanidæ. In *Leptochirus* I have not detected a sexual difference in the mandibular structure. The upper edges of the mandibles always have an erect tooth or horn, which I shall speak of as the "dens superior." The inner edges of the mandibles bear several teeth, those nearest the extremity being always acuminate, these I call "dentes tenaces;" while nearer the base there are more obtuse teeth, or a prominence of large size and irregular form, which I name "dens molaris;" the apical teeth are much more constant in their shape and position than those nearer the base. In the *L. mexicanus* group of species the upper edge of the mandible bears a tooth or tubercle nearer to the base than the superior tooth, and which I therefore call "dens supero-basalis."

§ 1. *Mandibulæ superne dente superiore unico munitæ.*

A. *Spatio frontali abrupte diviso, parte anteriore perpendiculari, parte posteriore horizontali.*

1. Leptochirus maxillosus.

Cucujus maxillosus, Fabr. Syst. Eleuth. ii. p. 93[1].

Leptochirus maxillosus, Er. Gen. et Spec. Staph. p. 825[2]; Fauv. Bull. Soc. Linn. Normand. ix. p. 18, t. 1. f. 2[3]; Notices ent. ii. p. 15, t. 1. f. 2[4].

Hab. Mexico, Teapa[3 4]; British Honduras, R. Sarstoon, Belize (*Blancaneaux*); Nicaragua, Chontales (*Janson*).—South America[1 2 3 4], Colombia to Rio Janeiro.

This species I have not been able to verify as Mexican; the examples named *L. maxillosus* in Sallé's collection were *L. proteus* and *L. extimus*.

2. Leptochirus brunneo-niger.

Leptochirus brunneo-niger, Perty, Del. Anim. Art. Brasil. p. 32, t. 7. f. 7[1]; Fauv. Bull. Soc. Linn. Normand. ix. p. 17[2]; Notices ent. ii. p. 13[3].

Leptochirus cayennensis, Lap. Etud. ent. i. p. 125, t. 4. f. 5[4].

Leptochirus maxillosus, var. *a*, Er. Gen. et Spec. Staph. p. 825[5].

Hab. Mexico (*coll. Chevrolat*[2 3]).—South America to Brazil[1 2 3 4 5].

Additional evidence is required before this insect can be regarded as a native of our region. I have seen only one individual reputed to have been thence obtained—a very old example in Chevrolat's collection; it is probable that Fauvel's[2 3] record of the species as Mexican depends on this example, and if so, I think it untrustworthy. Though common in South America, there is no other evidence as yet of the occurrence of *L. brunneo-niger* further north than Peru or Guiana.

3. **Leptochirus proteus.**

Leptochirus proteus, Fauv. Bull. Soc. Linn. Normand. ix. p. 16[1]; Notices ent. ii. p. 12[2].

Hab. Mexico (*coll. Chevrolat* [1 2]), Cordova (*Sallé*).—South America, Colombia [1 2] (*coll. Sharp*), Brazil [1 2].

I have seen only two examples of this species from our region; though considerably larger than the Colombian exponents, I cannot separate them by any other good characters.

4. **Leptochirus extimus.**

Nigerrimus, depressus, nitidissimus; mandibula sinistra dente superiore simplice, acuminato, dentibus duobus tenacibus, denteque magno molari cujus margine interno profunde emarginato.

Long. 12 millim.

Hab. Mexico, Toxpam, Tuxtla (*Sallé*).

Though very similar to *L. proteus*, this insect is readily distinguished by the different armature of the mandibles, and by the shorter antennæ, thorax, and elytra. The two basal teeth of the left mandible are conjoined to form one very large molar tooth with emarginate inner margin, and there is no trace of the inner or hinder margin of the erect tooth being armed, as it is in all the examples I have seen of *L. proteus*. The two median lobes of the vertex are not produced further forwards than the lateral lobes, and they are evidently on a higher plane than the posterior part of the forehead—thus distinguishing the species completely from *L. maxillosus*, which latter has, moreover, a longer thorax, and the horizontal lobe of the forehead deeply emarginate in the middle. There is much punctuation on the basal portions of the ventral segments in this species.

I have seen only two examples of *L. extimus*; though I can detect no difference between them, one was labelled *L. maxillosus*, and the other *L. proteus*, in Sallé's collection.

B. *Spatio frontali obliquo, haud fracto.*

5. **Leptochirus molossus.** (Tab. XIX. fig. 22.)

Nigerrimus, depressus; abdomine segmentis ventralibus ad basin minus late rugulosis; mandibulis crassis, sinistra dentibus tribus tenacibus, denteque molari sat prominulo, elongato, margine interiore bisinuato, dextra dentibus tenacibus duobus, denteque molari maximo.

Long. 14–18 millim.

Hab. Mexico, Jalapa (*Höge*), Tuxtla, Cordova (*Sallé*); British Honduras, R. Sarstoon, R. Hondo, Belize (*Blancaneaux*); Guatemala, El Tumbador, Las Mercedes, San Isidro, Pantaleon, Mirandilla, Capetillo, San Gerónimo, Teleman, Chacoj, San Juan in Vera Paz, Cubilguitz (*Champion*); Salvador (*Ulex*); Nicaragua, Chontales (*Belt*, *Janson*); Costa Rica, Irazu 6000 to 7000 feet, Cache (*Rogers*); Panama, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This is a smaller and narrower insect than the Brazilian *L. scoriaceus*, and it is therefore only the largest examples of *L. molossus* that could be mistaken for that species, and these may be readily distinguished by the mandibular structure; the molar tooth of the right mandible being in such examples of *L. molossus* of remarkably large size, subquadrate in form, and very prominent, and separated from the lower angular tooth by an extremely large interval; while on the left mandible there are three angular teeth beyond the molar mass instead of two as in *L. scoriaceus*. In *L. molossus* the front of the vertex is scarcely at all produced in the middle, the antennæ are moderately long and slender, and there is not more sculpture on the ventral segments than in *L. scoriaceus*.

We have received a large series of *L. molossus*, and, as a rule, it may be recognized by a glance at the mandibles. Small examples do not, however, exhibit the specific characters in any thing like so conspicuous a manner; in such specimens the mandibles are much shorter, and on the left the molar mass is very much reduced in length in the longitudinal direction; the molar tooth of the right mandible is also greatly reduced in size, and separated from the lower or basal angular tooth only by a small angular interval. These variations are apparently in part regional; thus while nearly all of the twenty-five Mexican examples belong to the larger or typical form, there is not one of this form amongst the twenty specimens from Nicaragua and the provinces further to the south, and even when the individuals from the south attain the size of the large Mexican form, they still retain the mandibular structure of the smaller Mexican form. This would suggest that there are really two closely allied species mixed by me under this name; but the mandibular structure in the smaller examples is not sufficiently stable for me to discriminate two forms amongst them with certainty, while in Mexico the small form seems quite certainly to be connected by gradations with the larger form. I have not traced *L. molossus* beyond our region, though the smaller and more slender examples greatly resemble an undescribed Colombian species, *L. angustulus* *, which, however, has apparently always two approximate punctures on the vertex, thus resembling superficially the allies of *L. mexicanus*, under which name, indeed, I have received an example from M. Fauvel.

6. **Leptochirus edax.**

Nigerrimus, depressus; abdomine segmentis ventralibus ad basin parum sculpturatis; mandibulis sat elongatis, sinistra dentibus duobus tenacibus et proprius ad basin tantum tuberculis duobus munita, absque dente

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* **Leptochirus angustulus,** sp. n.

Depressus, nigerrimus, abdomine subtus haud ruguloso; mandibula sinistra dentibus duobus tenacibus, denteque molari elongato, margine interno tridentato, dextra dentibus duobus tenacibus, denteque molari sat magno; vertice in medio anterius punctis duobus approximatis.

Long. 17 millim.

Hab. Colombia, Venezuela (*coll. Sharp*).

molari, dextra dentibus duobus tenacibus denteque molari mediocri, hoc a dente tenace vicino sæpius parum disjuncto.

Long. 14–18 millim.

Hab. MEXICO (*Flohr*), Jalapa (*Höge*); GUATEMALA, El Tumbador, Cerro Zunil, San Lucas 6500 feet, Volcan de Fuego 6400 feet, Capetillo, San Gerónimo, Purula, Sabo, (*Champion*); PANAMA, Volcan de Chiriqui, Bugaba, Tolé (*Champion*).

Var. α.

Major; mandibula sinistra haud crassa, dentibus duobus tenacibus denteque molari valde elongato, perparum prominulo; dextra dentibus duobus tenacibus denteque molari valde prominulo, a dentibus tenacibus intervallo longe et profunde disjuncto.

Long. 20 millim.

Hab. MEXICO, Sinaloa (*H. Edwards*).

Var. β.

Major; mandibula sinistra dentibus tribus tenacibus, absque dente molari, dextra dentibus duobus tenacibus denteque molari mediocri, hoc a dente tenace vicino parum disjuncto.

Long. 22 millim.

Hab. COSTA RICA (*van Patten*).

Var. γ.

Vertice in medio anterius punctis duobus approximatis impresso.

Hab. GUATEMALA, Dueñas (*Champion*).

This insect, like *L. molossus*, is placed in collections as *L. scoriaceus*. The larger developments of *L. edax* can be distinguished by a glance at the slender basal portion of the left mandible; the right mandible moreover appears at first to have only one angular tooth instead of two, but as the molar mass has an upper angular portion more or less detached from its basal part, I have preferred to call this an angular tooth but little separated from the molar tooth.

The small developments of *L. edax* are difficult to distinguish in a perfectly satisfactory manner from the imperfectly developed examples of *L. molossus*: the left mandible not only becomes shorter, but its basal portion becomes thicker, so that a molar tooth or mass evidently exists. In the small developments of *L. edax* this molar mass has a large longitudinal and a slight transverse extension, while in the small developments of *L. molossus* the reverse is the case.

There are some peculiar aberrant forms of which I have not seen sufficient examples to justify me in treating them as distinct, and which I therefore place at present as varieties.

Of the vars. α and γ I have seen only two examples of each; of var. β only one specimen. There exist also variations in other points that appear to me of minor importance, such as the extent of the sculpture on the ventral segments and the form of the erect tooth or horn of the left mandible; this latter not very rarely has the hind

margin near the apex more or less swollen, and occasionally this is carried to such an extent as to cause this horn to have a broad emarginate extremity.

7. **Leptochirus serriger.**

Depressus, niger; abdominis segmentis basalibus ad basin anguste rugulosis; mandibulis parum elongatis, absque dentibus molaribus, sinistra dentibus quatuor tenacibus et basin proprius dente quinto minore; dextra dentibus tribus tenacibus, et basin proprius dente quarto minuto.
Long. 12–13 millim.

Hab. MEXICO (*Truqui*), Cordova (*Sallé*), Jalapa (*Flohr*).

I establish this species upon four examples which I am unable to comprehend under either *L. edax* or *L. molossus*. *L. serriger* scarcely attains the size of the smallest examples of those species; the left mandible is armed internally with five teeth, which gradually decrease in size from the apical to the basal one, this latter being merely a tubercle; the apical tooth on the right mandible is large, and is followed by two equal rather approximate teeth, between which and the base the mandible itself is much narrowed and bears a small tubercle and still nearer the base a yet more rudimentary prominence; and the front of the vertex is much produced in the middle.

8. **Leptochirus gracilis.**

Depressus, niger; pectore, elytris pedibusque castaneo-rufis; abdomine parum sculpturato; mandibula sinistra dente erecto subparallelo, apicem versus haud acuminato, apice ipso emarginato.
Long. 11–12 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This insect is readily distinguished by the colour of the wing-cases and the peculiar form of the erect tooth on the left mandible; the armature of the inner margin of the mandibles is very similar to that of some of the extremely small varieties of *L. edax*. The characters are quite constant in the five examples before me.

§ 2. *Mandibulæ dente superiore et dente, vel tuberculo, supero-basali munitæ.*

9. **Leptochirus punctiger.**

Nigerrimus, sat depressus; vertice anterius in medio punctis duobus majoribus notato; mandibulis brevibus, dente supero-basali parvo; antennis sat elongatis.
Long. 15 millim.

Hab. MEXICO, Oaxaca, Orizaba (*Sallé*), Jalapa (*Höge*).

This is apparently the least rare of the species of this group. *L. punctiger* is similar to *L. mexicanus*, but has numerous points of distinction: the supero-basal tooth of the mandibles is only an acute tubercle; the superior tooth is large and strongly directed inwards, its inner margin, however, being only feebly sinuate; the mandibles themselves are rather short, and the basal or molar tooth on each is large and consists

of three subequal teeth; the vertex has large punctures on its anterior part, but there are no punctures on the middle; the rugose sculpture at the base of the ventral rings is only very slight in extent.

10. **Leptochirus quadricollis.**

Nigerrimus, sat depressus; vertice anterius in medio punctis duobus approximatis parum conspicuis notato; mandibulis dente superiore introrsum vergente, margine interne incrassato et sinuato, dente supero-basali minuto; antennis gracilibus.

Long. 20 millim.

Hab. Mexico (*Sallé, ex coll. Sturm*), Jalapa (*Höge*).

This species is readily distinguished from *L. mexicanus* not only by the characters mentioned in the diagnosis, but by several others: the supero-basal tooth of the mandible is here merely an acute tubercle, while the superior tooth is very large, strongly curved inwards, and with its inner margin sinuate; the lower internal tooth of the right mandible forms a large quadrate mass; there are no punctures on the middle of the vertex, and the two approximate punctures or depressions on the front are small; the inner margin of the two frontal depressions is but little elevated; and the rugose sculpture is not present at the bases of the ventral rings. The front coxæ are distinctly divided; the antennæ are longer than in either of the allied species, and the thorax is remarkably elongate.

11. **Leptochirus mexicanus.**

Leptochirus mexicanus, Er. Gen. et Spec. Staph. p. 826 [1].

Nigerrimus, sat depressus; vertice ad apicem punctis duobus approximatis, in medio duobus distantibus notato; mandibulis dente superiore introrsum parum vergente, dente supero-basali valde elongato; antennis sat gracilibus.

Long. abdomine extenso 15 millim.

Hab. Mexico [1] (*Flohr*), Cordova (*Höge*).

This is the species with which Erichson's description [1] best agrees. The punctures along the middle of the vertex are sometimes four in number, and placed in a transverse line; sometimes two, as described by Erichson. The inner portion of the margin of the two frontal depressions is remarkable for its great elevation; the interior basal or molar tooth of the left mandible is divided into three smaller teeth, the lower or posterior tooth being, however, very short and obtuse: the corresponding tooth on the right mandible is bidentate; the front coxæ are extremely approximated; and the first four ventral segments have a well-marked band of rugose sculpture at the base.

Mr. Flohr sent me three examples many years ago without any special locality, and I have for many years possessed a fourth from an old collection. Höge found a single immature example, piceous, with the head and thorax red, which I believe to be the same species; it, however, has the supero-basal tooth of the mandible shorter, and there are some other slight distinctions. These are all the specimens I have seen.

12. **Leptochirus cephalotes.**

Nigerrimus, sat depressus; mandibulis dente superiore introrsum vergente, margine interno haud incrassato, dente supero-basali elongato; prothorace transverso; antennis extrorsum incrassatis, articulis penultimis transversis.

Long. 15 millim.

Hab. Mexico, Guanajuato (*Sallé*, *Fauvel*).

This is readily distinguished from the allied species by the shorter thorax and the thicker antennæ. The superior tooth of the mandible is remarkably elongate, quite acuminate, and without any sinuation internally; the internal teeth are placed further from the base than in the preceding species, and on the left mandible the lower tooth is bidentate, on the right simply acuminate. The punctures on the vertex seem to be variable: sometimes there are two on the middle, but these may be absent, and the anterior approximate punctures are quite obsolete.

Four examples. I have preserved the name under which I received this insect from M. Fauvel, and with which it is labelled in M. Sallé's collection.

13. **Leptochirus ramosus.**

Nigerrimus, sat depressus; vertice in medio bipunctato, anterius punctis duobus majoribus notato; mandibulis dente superiore elongato, introrsum valde curvato, margine interno simplice, dente supero-basali elongato; prothorace subtransverso; antennis crassiusculis.

Long. 17 millim.

Hab. Mexico, Jalapa (*Höge*).

We have received only one example of this species; but I cannot doubt its being distinct. It is nearest to *L. cephalotes*, but the thorax is not so short, and the antennæ are not so thick externally; the superior teeth of the mandibles are similar, but the internal teeth are different—the molar tooth on the left mandible having an extreme extension in the longitudinal direction, and not being distinctly divided, though its basal portion is abruptly narrower; the corresponding tooth on the right mandible is approximately similar to that on the left, except that it has a rather deep emargination on the upper portion of its inner edge. The sculpture of the ventral rings is coarse and rather largely developed.

PRIOCHIRUS.

Acetabula anteriora posterius occlusa. Coxæ anteriores contiguæ, haud brevissimæ. Prosterni processus post eas minutus, vix perspicuus. Mentum elongatum.

This genus is very easily distinguished from *Leptochirus* by the prosternal structure and by the more elongate mentum. The different species are nearly always less depressed in form than is the case in *Leptochirus*. The genus, in the New World, is limited to our region; but it will also include, for the present, the greater portion of the species of the Old World hitherto placed in *Leptochirus*. In some of the eastern species the shape becomes nearly cylindrical (*P. mandibularis*, e. g.), and the exsertion

of the front coxæ is remarkable, so as to form a striking contrast to the structure of these parts in *Leptochirus*.

§ 1. *Frontal area depressed only slightly below the level of the vertex.*

1. Priochirus laxus.

Niger, abdominis apice piceo-rufo; vertice sat longe bicornuto, cornibus margine interno inferus prope basin dentato, apice subtruncato, vix perspicue emarginato, inter cornua area plana, sat depressa, margine anteriore bidentato.
Long. 12 millim.

Hab. British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Purula (*Champion*).

In this species the antennæ are rather long; the supra-antennal prominences very obtuse; the prothoracic channel very deep, but not foveolate behind; and the horns of the head divergent.

2. Priochirus bicornis.

Leptochirus bicornis, Fauv. Bull. Soc. Linn. Normand. ix. p. 20, t. 1. f. 4[1]; Notices ent. ii. p. 16.

Hab. Mexico[1], Jalapa (*Flohr*), Cordova (*Sallé*).

3. Priochirus hæmorrhous.

Minor, sat depressus, nitidus; piceo-niger, abdominis apice, tibiis tarsisque rufis; vertice sat longe bicornuto, cornibus apice emarginato, inter cornua area lata, inæquali, margine anteriore in medio emarginato, utrinque elevato.
Long. 8 millim.

Hab. Guatemala, Cubilguitz, Chiacam (*Champion*).

Very closely allied to *P. bicornis*, but with the frontal space between the horns much broader, the horns themselves longer and more slender and much less definitely bifid at the apex; the articulations of the antennæ rather longer, and the ventral segments not so free from sculpture.

Six examples.

4. Priochirus dilutus.

Minor, sat depressus, nitidus; piceus, elytris castaneo-rufis; vertice sat longe bicornuto, cornibus apice emarginato, inter cornua area lata, fere plana, margine anteriore in medio late parum profunde emarginato.
Long. 8 millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Although very close to *P. hæmorrhous*, the slight characters by which this insect is distinguished are quite constant in a series of sixteen examples. The colour of the elytra allows the species to be immediately recognized; but, besides this, the frontal area is rather flatter and less deeply emarginate in front.

§ 2. *Frontal area deeply depressed.*

5. **Priochirus divergens.** (Tab. XIX. fig. 23.)

Minus depressus, niger, nitidus; antennis pedibusque piceis; vertice cornibus duobus divergentibus, apicibus acuminatis, cornu margine interno subtus longius dentato, inter cornua area magis depressa, margine anteriore rotundato.

Long. 11–13 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Though very similar to *P. laxus*, this species is readily distinguished by the armature of the head, the horns being longer and acuminate at the tip; the space between the horns more depressed, with its front margin rounded instead of emarginate.

Four examples.

6. **Priochirus collaris.**

Minus depressus, niger, nitidus; pedibus piceis, abdominis apice rufescente; vertice cornibus duobus subparallelis, apicibus leviter emarginatis, cornu margine interno subtus longius dentato, inter cornua area magis depressa, margine anteriore in medio vix producto, seta munito; prothorace ad latera numerose setigero.

Long. 11 millim.

Hab. Guatemala, Purula 4000 feet (*Champion*).

This species has the space between the horns short and with a nearly straight anterior margin, the latter bearing a single long seta in the middle; these characters and the greater depression of the space below the level of the vertex distinguish the species from *P. laxus*, to which it is otherwise extremely similar. *P. collaris* has apparently another character, in the setigerous punctures at the side of the thorax being more numerous than usual. Unique.

7. **Priochirus laticornis.**

Convexus, niger, nitidus; pedibus piceis, abdominis apice rufo; vertice cornibus duobus latis, parallelis, apicibus truncato-emarginatis, inter cornua area profunde depressa, plana, margine anteriore truncato.

Long. 13 millim.

Hab. Mexico, Cordova (*Sallé*).

This apparently is the largest and least depressed of our species; it will be recognizable by its very broad, flat cephalic horns, which are broadly emarginate at the apex and have their inner margin slightly sinuate beneath; the lobes of the vertex much swollen, and their hind angles rectangular and sharply defined; and the prothoracic channel very deeply foveolate behind. Unique.

8. **Priochirus salvini.**

Minor, sat depressus, nitidus, niger; antennis pedibusque piceis, abdominis apice rufo; vertice cornibus

duobus brevibus, parallelis, apice externo subtus dentato-producto, facie inferiore medio longius dentata, inter cornua area concava, profunde depressa.
Long. 7–8 millim.

Hab. GUATEMALA, Volcan de Fuego 6400 feet (*Salvin*), Quiche Mountains 7000 to 9000 feet, Cerro Zunil, Calderas 7000 feet, Volcan de Agua 8500 to 10,500 feet, San Gerónimo, Sabo (*Champion*).

This species is quite similar in appearance to *P. hæmorrhous*, though readily distinguished by the cephalic structure and by the channel on the thorax being more deeply depressed behind. The long tooth of the horns of the vertex is placed so completely on the underside that it is difficult to detect. We have received a good series of specimens of *P. salvini*, which, though varying a little in size and also in some other minute particulars, are evidently conspecific. The most important variation is the existence occasionally of a fovea on the upper surface of the head on each side of the median channel.

Group **PROTEININA.**

MEGARTHRUS.

Megarthrus, Stephens, Ill. Brit. Ent. v. p. 330 (1832); Erichson, Gen. et Spec. Staph. p. 904 (1840).

This genus has hitherto consisted only of a few species found in the northern portions of the eastern and western hemispheres, extending, however, to Madeira and the Canary Islands.

1. **Megarthrus zunilensis.** (Tab. XIX. fig. 15.)

Fuscus; antennarum articulis duobus ultimis testaceis; prothorace lateribus plus minusve distincte rufescentibus, ad angulos posteriores breviter latius excisis.
Long. 3 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Antennæ slender, the two terminal joints conspicuously paler than the others. Thorax densely punctate, with a broad channel along the middle, the lateral margins slightly angulate in the middle; the hind angles rectangular, slightly acute, and behind them a small excision broader than long. Elytra nearly twice as long as the thorax, very densely and finely punctured. Male with the hind and middle tibiæ rather thicker, and the terminal ventral plate largely and deeply excised.

A distinct species, somewhat resembling the European *M. sinuaticollis*, but with different thoracic margin and remarkably coarse sculpture of the elytra.

2. **Megarthrus solitarius.**

Fusco-niger, opacus, fortiter punctatus; pedibus piceo-testaceis; prothorace antrorsum angustato, lateribus undulatis, angulo posteriore acuto, retrorsum spectante.
Long. $2\frac{3}{4}$ millim.

Hab. GUATEMALA, Purula (*Champion*).

In this species the thorax becomes broader from the apex to the base; the sides are sinuate so as to form three obscure angles between the front and the hind angle; the latter is remarkably acute, and behind it is a very abruptly defined excision. The sculpture is coarse.

Only one example was procured; it is apparently a female and is not in very good condition; the terminal joint of the antennæ is elongate and appears to be a little paler than the others.

Subfam. *OMALIINÆ.*

OMALIUM.

Omalium, Gravenhorst, Col. Micr. p. 111 (1802); Erichson, Gen. et Spec. Staph. p. 871 (1840).
Homalium, Gemminger & Harold, Cat. Col. ii. p. 665; Fauvel, Notices ent. vii. p. 41.

This genus, taken in the larger sense of the Munich Catalogue, includes about 120 species, most of them European; Fauvel (*t. c.*), however, records 23 North-American species. Many genera have been proposed for the European species, but these it would not be possible to accept at present, as they are based on very slight characters and on an examination of only a portion of even the European forms.

As yet our region has produced only eight or nine extremely obscure species (which may perhaps ultimately form a genus allied to *Anthobium* as well as to *Omalium*), and Tropical South America has so far only a single equally obscure representative. Thus as we have no other genera of the subfamily to record, and as North America is very rich in this subfamily, it is evident that we have here a striking contrast between our region and that of North America. It may be worth while to mention that of our eight or nine species, four have been found only in what may be looked on as the alpine parts of our region.

1. **Omalium sordidum.**

Depressum, nigricans, subopacum, parce subobsolete punctatum; antennarum basi pedibusque sordide testaceis; elytris fusco-rufis, marginibus plus minusve argute nigricantibus.
Long. 2½–3 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cerro Zunil, Capetillo, Zapote, Carrizal, near the city, San Gerónimo (*Champion*).

Thorax very strongly transverse, without foveæ on the disc, sparingly and indistinctly punctured, twice as broad as long, rounded at the sides; hind angles obtuse. Elytra nearly twice as long as the thorax, rather sparingly and finely punctured; of an obscure reddish colour, usually more dilute on the humeral region, and the hind margins and side margins blackish. The male has the posterior part of the metasternum impressed with a deep groove in the middle, the margins of the groove being plicate; the terminal ventral segment broadly emarginate.

We have received a large number of examples of this obscure insect: if I am right in considering them all to be one species, it is evidently variable in size, colour, and minute details of form and sculpture. We have only four Mexican examples: these are labelled *O. flebile*, Fauv., and *O. præustum*, Motsch., in Sallé's collection. It is quite uncertain whether Motschulsky really had this species before him when he penned his very imperfect description of *Phlœonomus præustus*, which indeed agrees even better with our *O. atomarium*. At Carrizal, Mr. Champion procured *O. sordidum* in numbers from a fungus; and as many of these examples are immature, it is probable they may have undergone their metamorphoses in it.

M. Fauvel (Notices ent. iii. p. 7) in describing *O. xanthopterum* gives as one of its localities "Mexique, en Octobre, A. Sallé." There does not exist any insect under this name in M. Sallé's collection; and the typical examples of *O. xanthopterum* from Caracas do not sufficiently agree with our *O. sordidum* to induce me to record our species under the name given by Fauvel to the Venezuelan insect, though the two are very close.

2. **Omalium anceps.**

Depressum, nigrum, opacum; antennarum basi pedibusque testaceis; prothorace obsolete, elytris crebrius fortiusque, punctatis.

Long. 2½ millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet, Volcan de Agua 8500 to 10,500 feet (*Champion*).

I separate this insect from *O. sordidum* on account of the coarser and closer punctuation of the elytra, and the more coarsely alutaceous surface of the thorax; the colour also is more obscure than in any of the examples of *O. sordidum*. The male characters are similar, though not quite so conspicuous. We have received fourteen examples.

3. **Omalium triste.**

Longius, depressum; nigrum, tibiis tarsisque testaceis; crebre minus obsolete punctatum, subnitidum, prothorace disco obsoletissime bi-impresso.

Long. 3¼ millim.

Hab. GUATEMALA, Totonicapam 10,500 feet (*Champion*).

Although we have received only a single example of the female sex of this species, there can be no doubt it is quite distinct from *O. sordidum*; independently of the black colour, the punctuation of the elytra is closer and more distinct, and the general form more elongate. Although the femora are black, their tips exposed at the sides of the body are yellow like the tibiæ. The unique example was found under the bark of a pine-tree.

4. **Omalium atomarium.**

Omalium atomarium, Fauv. Bull. Soc. Linn. Normand. x. p. 16[1]; Notices ent. iii. p. 8[2].

Hab. MEXICO, Teapa (*Pilate*[1 2])?; GUATEMALA, Yzabal (*Sallé*), Zapote, El Reposo (*Champion*).

Fauvel[1 2] gives as the only locality "Teapa, Mexique (*Pilate*), collection de M. A. Sallé et la mienne." The two examples of *A. atomarium*, Fauv., in M. Sallé's collection are, however, from Guatemala, and the Mexican habitat therefore requires confirmation.

5. **Omalium pumilio.**

Depressum, omnino peropacum, obsoletissime vix perspicue punctatum, subtilius pubescens; fusco-nigricans, pedibus testaceis.

Long. 2–2½ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

This species is readily distinguished by the extremely opaque surface, without definite punctuation; there are scarcely any traces of impressions on the thorax, the hind angles of which are sharply defined and slightly obtuse. The male has a gentle emargination of the hind margin of the last ventral plate. Four examples.

6. **Omalium faustum.**

Depressum, omnino peropacum, obsoletissime vix perspicue punctatum, subtilissime pubescens; nigricans, pedibus sordide testaceis; prothorace convexiusculo, minus fortiter transverso.

Long. 1¾–2¼ millim.

Hab. PANAMA, Bugaba (*Champion*).

This insect is extremely close to *O. pumilio*, but is rather smaller and narrower, and presents several other slight differences. The antennæ are short, with the joints 6–10 transverse. The thorax is rather narrow, and not so strongly transverse, and a little narrower in front than in the allied species. The elytra are short, scarcely one and a half times so long as the thorax. Twelve examples.

7. **Omalium incultum.**

Depressum, opacum; fusco-ferrugineum, antennis extrorsum nigris, pedibus testaceis; prothorace fere impunctato, dorso late, parum argute, bi-impresso; elytris dense punctatis.

Long. 3–3¼ millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

A broad and short, very depressed insect, distinguished from the other *Omalia* of our region by the bi-impressed but impunctate thorax, and by the densely punctate elytra. The thorax has a slightly sinuous outline, and the hind angles are obtuse though distinctly marked; the elytra are not quite so long as the thorax. The male has an emargination of the hind margin of the last ventral segment. Ten specimens.

8. **Omalium læticulum.** (Tab. XIX. fig. 24.)

Parvum, depressum, subopacum; nigrum, prothorace rufo, elytris fusco-rufis, antennarum basi pedibusque testaceis; parcius obsolete punctatum; prothorace medio bi-impresso.
Long. 2 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ short; the four basal joints yellow, the others dark, the sixth joint transverse but not broad. Thorax strongly transverse, slightly sinuate at the sides, the hind angles rectangular; the disc with two broad, short, rather widely separated depressions; the surface alutaceous, almost impunctate. Elytra twice as long as the thorax, sparingly, very finely, and obsoletely punctured. Seven examples.

Subfam. *MICROPEPLINÆ.*

MICROPEPLUS.

Micropeplus, Latreille, Gen. Crust. et Ins. iv. p. 377 (1809); Erichson, Gen. et Spec. Staph. p. 911 (1840).

This peculiar genus of about twenty species has hitherto been supposed to be confined to the northern portions of the globe, its species being about equally divided between the New and the Old Worlds. The existence of a *Micropeplus* so far south as Guatemala was quite unexpected.

1. **Micropeplus acumen.** (Tab. XIX. fig. 25.)

Fusco-piceus, antennis pedibusque testaceis, prothorace utrinque flavo-signato; prothorace elytrisque costatis; abdomine acuminato, multicostato.
Long. $1\frac{1}{3}$ millim.

Hab. GUATEMALA, Cahabon, El Tumbador (*Champion*).

Head very short and broad. Thorax very strongly transverse, broader than the elytra, the sides angulate in the middle, the hind angles acute, and with a very minute angulation between the latter and the middle angle; quadricostate, the outer costæ less distinct and regular than the inner ones. Elytra short, rather longer than the thorax, each with three strongly raised costæ in addition to the raised suture. Hind body short, strongly acuminate; each of the three basal segments with six, the fourth segment with four, raised carinæ.

This is a very distinct *Micropeplus* and the smallest as yet known of the genus. Only one example was procured in each locality; one of them is more ferruginous in colour than the other, such variation being common to the other species of the genus.

SUPPLEMENT.

CNEMIDOTUS (p. 1).

2. **Cnemidotus mexicanus.**

Cnemidotus mexicanus, Wehncke, Deutsche ent. Zeit. xxvii. p. 145 (1883) [1].

Sat elongatus, pallide testaceus, minus argute nigro-maculatus, sat fortiter punctatus; coxarum laminis posterius rotundatis.

Long. $3\frac{1}{2}$ millim.

Hab. Mexico (*Flohr* [1]), near the city (*Höge*).

This insect differs from *C. simplex* by the much larger punctures of the upper surface, and by the margins of the elytra not being dentate near the extremity; it is quite as similar to *C.* 12-*punctatus*, Lec., but that species has the hind margins of the coxal laminæ angulate, and the spots of the upper surface much more largely developed and very definite.

In *C. mexicanus* the thorax is bimaculate at the base and the spots extend inwards so as to be united in front of the scutellum; the punctuation on these spots is coarser, but the surface there is not at all depressed. The punctures of the wing-cases are black, and so is the suture and a common sutural spot at the apex; the other black spots are small and indistinct. The apices of the elytra are strongly sinuate.

HALIPLUS (p. 2).

4. **Haliplus curtulus.**

Brevis, convexus, fulvus; elytris obsolete nigro-maculatis; fortiter punctatus, elytrorum interstitiis seriatim parce sat fortiter punctatis.

Long. $3\frac{1}{4}$ millim.

Hab. Mexico, Vera Cruz (*Höge*).

Allied to *H. robustus*, but smaller, with the sculpture much less deep, and the surface only very indistinctly spotted. The middle of the prosternum is coarsely margined on each side, and there is a raised line, continuous with the prosternal line, on each side of the middle of the mesosternum. The coxal laminæ are coarsely and closely punctured, and their hind margins are denticulate at the suture. The head and thorax are rather closely punctate, and the latter has no depressions.

CANTHYDRUS (p. 5).

1 (A). **Canthydrus similaris.**

Breviter ovalis, convexus, nitidus, testaceus; elytris castaneis, crebre obsolete punctatis; prosterni processu medio vix perspicue depresso; coxarum laminis parce punctatis.

Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Vera Cruz (*Höge*).

Distinguished from *C. simplex* by the more oval form, but in other respects extremely similar to that species. A considerable series showing no variation has been received.

Canthydrus rufipes (p. 7).

Before the localities given, insert :—MEXICO, Vera Cruz, San Juan, Bautista in Tabasco (*Höge*).

LACCOPHILUS (p. 9).

Laccophilus apicalis (p. 10).

To the localities given, add :—PANAMA, Peña Blanca, Panama city (*Champion*).

Laccophilus decipiens (p. 10).

To the Mexican locality given, add :—Chihuahua city (*Höge*).

In this, as well as in some other species, there occur rarely females with the epipleuræ dilated. I had previously supposed this to be a constant character for this sex in the species where I noticed it; but I am now convinced that in the case of this, and probably of other species, it is only a rare and exceptional occurrence: another very remarkable form of female dimorphism is thus added to those previously recognized as occurring in this family of Coleoptera.

Laccophilus fuscipennis (p. 10).

The character of dilated epipleuræ is not a specific one, and this species, therefore, is distinguished from *L. confusus*, so far as I can at present judge, and we have received no more examples of it, solely by the larger size and the immaculate upper surface, and the absence of a coxal file in the female.

Laccophilus confusus (p. 11).

To the Mexican locality given, add :—San Juan Bautista in Tabasco, Vera Cruz (*Höge*).

We have received now a good series of this species, and it appears at present to be really distinct from *L. americanus* : a form of the female with dilated epipleuræ occurs rarely. The coxal file is apparently always present in the female, though much more delicate than it is in the male.

10 (A). **Laccophilus suffusus.**

Laccophilus suffusus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 293[1].

Hab. PANAMA, Bugaba (*Champion*).—SOUTH AMERICA, Bahia[1].

10 (B). **Laccophilus filicornis.**

Ovalis, subdepressus, nitidus, testaceus; pectore sub-infuscato; elytris fuscis, fascia basali flammulati, alia sub-apicali disintegrata apiceque testaceis.

Long. $4\frac{1}{2}$, lat. $2\frac{1}{8}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Very similar to *L. suffusus*, but very different in the male sex, owing to the absence of a coxal file and to the fact that the terminal ventral segment is truncate and its hind margin not acuminate in the middle; this structure allows the male to be readily distinguished from the female, in which the corresponding segment is simple, acuminate in the middle, and not truncate. The female can be distinguished from that sex of both *L. suffusus* and *L. agilis*, to each of which it is extremely similar, by the more distinct yellow marks near the apex of the elytra.

This insect is almost exactly like *L. optatus*, but that species has an elongate prosternal process.

11 (A). **Laccophilus insignis.**

Laccophilus insignis, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 290 [1].

Hab. NORTH AMERICA, Texas [1], Lower California [1].—MEXICO, Monterey in Nuevo Leon (*Höge*).

Laccophilus oscillator (p. 11).

To the Mexican locality given, add:—Northern Sonora (*Morrison*).

Laccophilus duplex (p. 12).

To the localities given, add:—PANAMA, Bugaba (*Champion*).

We have received only one example, a female, from the State of Panama, but it appears to me conspecific with the Mexican insect, though I have no longer the female before me to compare it with. The prosternal process is so much longer in this species than it is in the others of the group where I have placed it, that I think it will have to be located in group 5 of the genus.

14 (A). **Laccophilus agilis.**

Ovalis, parum convexus, nitidus, testaceus; elytris fascia sub-basali flammulata testacea.

Long. $3\frac{1}{4}$, lat. $1\frac{3}{4}$ millim.

Hab. PANAMA, Taboga Island (*Champion*).

Very similar to *L. duplex*, but much smaller, and without doubt a distinct species. The elytra bear an excessively minute punctuation, but reticulation is scarcely visible; the basal fascia is almost entire, consisting of short longitudinal marks nearly touching one another; there are two very small pallid marks close to the suture about the

middle, and one at each side; externally the apex also is obscurely pale. The under surface is quite pale, the breast not being at all infuscate. It is rather difficult to distinguish the sexes, the male characters being limited to the minute sexual clothing of the tarsi; in both sexes the terminal ventral segment is simple, without truncation or sinuation.

The species is also extremely similar to *L. suffusus*, from which it is distinguished by the complete absence of a coxal file.

19. **Laccophilus fragilis.**

Ovalis, angustus, testaceus, elytris sordide testaceis, femoribus quatuor anterioribus palpisque viridescentibus; prothorace basi subtruncato.
Long. $3\frac{1}{2}$, lat. $1\frac{3}{4}$ millim.

Hab. PANAMA, near the city (*Champion*).

An obscure species, of which only two females have been obtained; it belongs to the group with elongate prosternal process, and it is probable that the male possesses no coxal file; in the female the middle of the last ventral segment projects as a long lobe owing to the segment being truncate-emarginate on each side; there is scarcely any sculpture on the ventral segments. It is probable that during life the more pellucid parts of the body are viridescent, as some green colour still remains evident on the femora, palpi, and antennæ. The coloration appears to be the chief point by which the species is distinguished from *L. ovatus*.

HYDROVATUS (p. 14).

Hydrovatus obscurus (p. 15).

Before the localities given, insert:—MEXICO, Tlacotalpam (*Höge*).

1 (A). **Hydrovatus concolor.**

Brevissimus, sat convexus, piceo-niger, nitidus; antennis pedibusque rufis; crebrius sat fortiter punctatus.
Long. $2\frac{3}{4}$, lat. fere 2 millim.

Hab. MEXICO, near the city (*Höge*).

This is a much larger and broader insect than *H. obscurus*, and is comparatively less convex; it is readily distinguished by the very dark colour and the more numerous punctuation. The head is truncate in the middle in front, and the punctuation of the thorax is unusually close and distinct. The breast is very deeply and coarsely punctured. I do not observe any sexual differences among the four specimens obtained.

Hydrovatus inornatus (p. 15).

To the Mexican locality given, add:—near the city (*Höge*).

The single example recently received is a male; it differs strikingly from the female

by the comparatively large front tarsi, the second joint being strongly transverse, but agrees with the other sex in the peculiarly dull upper surface and obsolete sculpture.

DESMOPACHRIA (p. 16).

6 (A). **Desmopachria speculum.**

Breviter ovalis, fere omnino esculpturatus, nitidissimus, ferrugineus, elytris sordidis; capite lato, brevi, clypeo rotundato, tenuissime marginato.
Long. $1\frac{3}{4}$, lat. $1\frac{1}{3}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Remarkable on account of the excessively polished surface, on which, however, a very fine punctuation may be detected, more particularly on the anterior parts. In other respects this insect is very near to *D. circularis*, though a little larger in size. Unique.

6 (B). **Desmopachria striola.**

Brevis, lata subrotundata, testaceo-ferruginea; elytris sutura fuscescente, striola valde abbreviata impressa; corpore subtus lævigato; clypeo anterius rotundato, tenuissime marginato.
Long. $1\frac{1}{2}$, lat. vix 1 millim.

Hab. PANAMA, near the city (*Champion*).

This insect is rather smaller and narrower than *D. circularis*, and is readily distinguished by the definite, though short, sutural stria. Unique.

Desmopachria glabricula (p. 18).

To the locality given, add:—PANAMA, David, San Miguel in the Pearl Islands (*Champion*).

Desmopachria mexicana (p. 19).

To the Mexican locality given, add:—Northern Sonora (*Morrison*).

9. **Desmopachria vicina.**

Breviter ovalis, convexa, crebrius punctata, testacea, elytris longitudinaliter nigro-signatis, prothorace basi apiceque nigricantibus.
Long. vix 3, lat. $1\frac{3}{4}$ millim.

Hab. MEXICO, Vera Cruz (*Höge*).

This species is extremely closely allied to the Brazilian *D. varians*, but the good series obtained by Herr Höge present certain constant differences, viz. the general shape is rather more elongate, the punctuation of the upper surface is not quite so dense, the thorax is infuscate on the front margin in the middle, and the longitudinal dark marks on the elytra are almost separate from one another.

BIDESSUS (p. 19).

Bidessus hydrovatoides (p. 20).

Before the locality given, insert:—MEXICO, Vera Cruz (*Höge*).

4 (A). **Bidessus maculatus.**

Anodochilus maculatus, Bab. Trans. Ent. Soc. Lond. iii. p. 16 (1841)[1].

Bidessus maculatus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 348[2].

Hab. PANAMA, near the city (*Champion*).—SOUTH AMERICA, Brazil [1 2].

5 (A). **Bidessus curtulus.**

Breviter ovalis, convexus, absque pubescentia, nitidus, niger, parce punctatus; elytris signatura sub-basali aliaque ad apicem testaceis; prothorace rufo-sordido, basi apiceque obscurioribus; antennis pedibusque flavis.

Long. $1\frac{2}{3}$, lat. $\frac{7}{8}$ millim.

Hab. PANAMA, Taboga Island, San Miguel in the Pearl Islands (*Champion*).

Head obscure red, the clypeus distinctly margined in the middle; striola on the wing-case rather longer than that on the thorax, the posterior yellow mark placed quite at the apex; the coxæ with only a few obsolete punctures.

Allied to *B. quadrisignatus*, but only half the size and with the yellow mark on the wing-case extending quite to the apex. Numerous examples.

6 (A). **Bidessus centralis.**

Ovalis, sat convexus, dense punctatus, subtilissime pubescens, parum nitidus, testaceus; capite abdomineque fuscescentibus; elytris nigris, fascia sub-basali ad suturam interrupta signaturaque anteapicali flavis.

Long. $2\frac{1}{2}$, lat. 1 millim.

Hab. MEXICO, Chihuahua city (*Höge*).

Allied to *B. pictodes*, but of more elongate form and more acuminate behind; and with the yellow marks on the elytra of a different shape, the basal fascia being more irregular and with a more or less distinct prolongation extending backwards from it near the suture; the apical mark is subhamate, and placed well in front of the apex; the striola on the wing-case is about as long as that on the thorax.

Bidessus lynceus (p. 22).

Before the localities given, insert:—MEXICO, Tehuantepec (*Höge*).

Bidessus spretus (p. 24).

Before the localities given, insert:—MEXICO, Mazatlan (*Höge*).

Bidessus obtusus (p. 24).

Before the locality given, insert:—MEXICO, San Juan Bautista in Tabasco, Mazatlan in Sinaloa, Tapachula in Chiapas (*Höge*).

16 (A). **Bidessus pullus.**

Hydroporus pullus, Lec. Proc. Ac. Phil. 1855, p. 294[1].
Bidessus pullus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 368[2].

Hab. NORTH AMERICA[1 2].—MEXICO, Tupataro in Guanajuato (*Höge*).

Four examples of a *Bidessus* obtained at Tupataro, though differing much *inter se*, I cannot separate from this species, which is widely distributed in North America, but very imperfectly known to me.

Bidessus adumbratus (p. 25).

To the localities given, add:—MEXICO, San Juan Bautista in Tabasco (*Höge*); PANAMA, San Miguel in the Pearl Islands (*Champion*).

DERONECTES (p. 26).

Deronectes æquinoctialis (p. 27).

To the Mexican localities given, add:—Northern Sonora (*Morrison*).

In this district the late Mr. Morrison obtained both the typical form and a small dark variety, which may possibly prove to be distinct.

2 (A). **Deronectes grammicus.**

Suboblongus, opacus, ferrugineus, supra nigro-testaceo variegato, elytris lineis elongatis ornatis; dense minuteque punctatus; elytris stria suturali posterius abbreviata striaque juxta hanc magis profunda et elongata; antennis pedibusque testaceis, illis extrorsum tibiisque fuscis, tarsis piceis.
Long. $5\frac{1}{2}$, lat. 3 millim.

Hab. MEXICO, near the city (*Höge*). One example

This remarkable *Deronectes* is of more elongate form than any of the others of our region, and is readily distinguished by the numerous elongate lines of colour on the elytra. The antennæ are elongate; the head is yellow, with the margins of the eyes black; the thorax is yellow, black on the front margin, and with a large double black mark at the base; the elytra bear alternate lines of black and yellow colour, and are spotted with yellow at the sides. The hind coxal cavities are very distinctly separated.

HYDROPORUS (p. 28).

7 (A). **Hydroporus corvinus.**

Ovalis, convexus, absque pubescentia, opacus, niger, elytris ad latera et ad basin interdum testaceo-signatis, pedibus piceis, antennis testaceis extrorsum fuscescentibus; elytris serie suturali punctorum, punctisque obsoletis irregulariter adjectis; prothorace punctato, ad latera et ad basin subrugoso.
Long. 4, lat. $2\frac{1}{2}$ millim.

Hab. MEXICO, Northern Sonora (*Morrison*).

This species is closely allied to *H. addendus*; but besides differing much in colour, it

has a narrower prosternal process, so that it is no doubt distinct. Of the three examples received one is quite black, and the other two have an obscure yellow mark at the base of each wing-case, and two spots at the side, and also an indistinct spot on the disc of the thorax.

10 (A). **Hydroporus civicus.**

Oblongo-ovalis, niger, dense punctatus, evidenter pubescens; capite prothoracisque lateribus rufescentibus; pedibus rufis, antennis fusco-rufis.

Long. 4–5 millim.

Mas subopacus, subtiliter punctatus; tarsis anterioribus latis.

Fem. omnino opacus, obsolete punctatus; tarsis anterioribus sat latis.

Hab. MEXICO, Ciudad in Durango (*Höge*).

Allied to *H. modestus*, but more oblong in outline, with the punctuation not quite so dense and fine, and the tarsi much broader; the front claws of the male are curvate and nearly equal, the posterior one being, however, more abruptly bent at the base. The broad feet of the male will permit of the identification of the species without much difficulty. A good series was obtained exhibiting no variation in addition to the sexual differences.

10 (B). **Hydroporus axillaris.**

Hydroporus axillaris, Lec. Proc. Ac. Phil. 1855, p. 293[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 479[2].

Hab. NORTH AMERICA[1 2].—MEXICO, Northern Sonora (*Morrison*).

There is some doubt whether this is really Leconte's species, as the only example I examined of that insect[2] was deprived of its feet, and is not now in my possession. In our insect the male and female are very similar, but the male has the anterior claw of the front foot much shorter than the other claw.

12. **Hydroporus vilis.**

Hydroporus vilis, Lec. Ann. Lyc. N. York, v. p. 208[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 484[2].

Hab. NORTH AMERICA[1 2].—MEXICO, Northern Sonora (*Morrison*), Guanajuato (*Höge*).

AGABUS (p. 32).

2 (A). **Agabus ——?**

Hab. MEXICO, Villa Lerdo, Durango (*Höge*).

We have received a single female example of an *Agabus* very similar to the European *A. biguttatus*, but with a rather smaller thorax, and there is little doubt it will prove distinct from any of the North-American allied forms.

2 (B). **Agabus texanus.**

Agabus texanus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 505 [1].

Hab. NORTH AMERICA, Texas [1].—MEXICO, Northern Sonora (*Morrison*), Refugio in Durango (*Höge*).

2 (C). **Agabus disintegratus.**

Gaurodytes disintegratus, Crotch, Trans. Am. Ent. Soc. iv. p. 416 [1].
Agabus disintegratus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 510 [2].

Hab. NORTH AMERICA [1 2].—MEXICO, Paso del Norte in Chihuahua (*Höge*).

We have received only one example from our region.

4. **Agabus flohrianus.**

Elongatus, subdepressus, niger, antennis rufis, pedibus piceis; superne subtiliter reticulatus, vel nitidus (♂), vel opacus (♀); prothorace angusto, basin versus leviter angustato, angulis posterioribus obtusis.
Long. 10 millim.

Hab. MEXICO, Amecameca in Morelos (*Flohr*, *Höge*).

Allied to *A. cordatus*, Lec., and *A. amaroides*, Sharp; it is distinguished from the latter by the peculiar form of the thorax, which, instead of becoming broader behind, is a little narrower at the base than it is in front, and much narrower than the base of the elytra. The upper surface is densely and finely reticulate, and there are three irregular series of punctures on each wing-case, and a minute depression on the disc of the thorax; all the legs are elongate, the hind pair remarkably long and slender. The male, in addition to the surface being more shining than it is in the female, has the basal three joints on the front and middle feet a little incrassate.

AGAMETRUS (to precede the genus *Copelatus*, p. 34).

Agametrus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 547 (1882).

This genus has hitherto consisted of three species found in the north-west parts of South America.

1. **Agametrus nitens.**

Late ovalis, depressus, nitidissimus, niger, antennis palpisque rufis, capite anterius et in vertice prothoraceque ad latera rufescentibus, elytro singulo versus latus post medium puncto flavescente notato; prothorace basi utrinque sinuato, angulis posterioribus acutis; elytris omnino obsoletissime reticulatis.
Long. $7\frac{1}{2}$, lat. 4 millim.

Hab. PANAMA, Peña Blanca 3000 feet (*Champion*).

This insect is larger and more depressed than *A. labiatus*, and is destitute of the lateral linear rufescent marks on the elytra, and has the base of the thorax more sinuate on each side. Only one example was obtained; it is a male, and has very distinct sexual pubescence on the front and middle feet, and a few oblique scratches on each side of the middle of the last ventral segment.

COPELATUS (p. 34).

Copelatus laccophilinus (p. 35).

To the Panama locality given, add:—Bugaba (*Champion*).

A good series has now been received showing scarcely any variation. The male differs from the female only by a slight dilatation of the front and middle tarsi.

6 (A). **Copelatus mancus.**

Oblongo-ovalis, sat angustus, parum convexus, piceus, elytris fascia basali apiceque testaceis, antennis pedibusque rufis; elytris striis decem subtilibus ante apicem multo abbreviatis et haud ad basin attingentibus; femina prothorace utrinque striguloso.

Long. 5, lat. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Although we have received only a single immature female of this species, there can be no doubt it is very distinct. The elytral striæ are of unequal length at the base, the 3rd, 5th, and 7th reaching nearly to the base, while the others are shorter; the 2nd, 4th, 6th, and 8th striæ are very short, and more or less interrupted; even the longer striæ cease much in front of the apex. The sides of the thorax in the female bear rather long, fine striæ, and there are a few still shorter and finer striæ on the disc; there are a very few such striæ on the lateral part of each elytron. The basal yellow fascia on the elytra is very distinct, but does not extend quite to the lateral margin; there is no trace of a submarginal stria.

Copelatus prolongatus (p. 39).

To the locality Panama, add:—Bugaba, David (*Champion*).

Copelatus posticatus (p. 39).

Mr. Champion obtained near the city of Panama a fresh variety, similar to the var. *signatus*, but a good deal smaller, and with much diminished sculpture on the thorax.

Copelatus impressicollis (p. 40).

To the Mexican localities given, add:—Northern Sonora (*Morrison*).

The individuals from this locality are all of large size and have the full complement of striæ on the elytra; and the females have a more perfect development of the sexual sculpture on the thorax than those from other localities. The species is one of the most difficult of the genus to recognize on account of its great variation; in some examples even the submarginal stria is very obsolete, and such individuals are liable to be referred to the other section of the genus. Some examples much resemble *C. glyphicus*, Say, but that species has the submarginal stria very definite, and the

space between it and the epipleura smooth, whereas in *C. impressicollis* this space is always covered with coarse punctures. The varieties of the species seem to be to a large extent local; the series from Sonora shows only slight variation.

Copelatus integer (p. 40).

To the Panama locality Bugaba, add:—David, San Miguel in the Pearl Islands (*Champion*).

Copelatus fragilis (p. 40).

To the locality given, add:—Mexico, San Juan Bautista in Tabasco (*Höge*).

COPTOTOMUS (p. 41).

1. **Coptotomus obscurus.**

Coptotomus obscurus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 601[1].
Coptotomus interrogatus, huj. op. p. 41[2].

Hab. North America[2], Texas[1].—Mexico, Guanajuato[2], Tupataro (*Höge*).

This change of name results from both sexes of our species having been obtained at Tupataro, and an inspection of the male proving that it is *C. obscurus*.

RHANTUS (p. 42).

Rhantus atricolor (p. 42).

To the Mexican localities given, add:—Northern Sonora (*Morrison*), Mochitlan (*Baron*).

HYDATICUS (p. 43).

3. **Hydaticus amazonicus**, var.?

Hydaticus amazonicus, Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 655[1].

Hab. Mexico, Vera Cruz (*Höge*).—South America, Amazons[1], Brazil (*coll. Sharp*).

The unique example differs from the type by its narrower and more depressed form, and by the absence of the basal fascia and lateral spots from the elytra; but as it agrees with a Brazilian example I obtained from an old collection, I have treated it as a variety of *H. amazonicus*.

THERMONECTES (p. 43).

Thermonectes succinctus (p. 44).

To the locality Mexico, add:—Ventanas (*Forrer*), Vera Cruz (*Höge*).

7 (a). **Thermonectes ——?**

Hab. Mexico, Presidio (*Forrer*).

A single female in a very bad state of preservation seems to belong to an undescribed species; it is allied to the convex members of the genus, such as *T. depictus*; the thorax is apparently not marked with black.

MEGADYTES (p. 46).

Megadytes fraternus (p. 47).

To the localities given, add:—PANAMA, Volcan de Chiriqui 4000 to 6000 feet, Panama city (*Champion*).

Megadytes giganteus (p. 47).

To the Mexican locality given, add:—Presidio (*Forrer*).

CYBISTER (p. 47).

Cybister fimbriolatus (p. 48).

The specimens from Vera Cruz, alluded to as forming a well-marked variety of short form, I now consider to be *C. explanatus*; the only evidence of the existence of this North-American species at Vera Cruz is therefore the unique specimen of a female variety also mentioned (*l. c.*).

1 (A). **Cybister explanatus.**

Cybister explanatus, Lec. Ann. Lyc. N. York, v. p. 202[1]; Sharp, Trans. Roy. Dubl. Soc. n. s. ii. p. 734[2].

Hab. NORTH AMERICA, California[1 2].—MEXICO, Vera Cruz, near the city (*Höge*).

This species is readily distinguished from the shorter varieties of *C. fimbriolatus* by the spinose angle of the hind femora. The only female before me has a well-marked sexual sculpture of irregular scratches on the basal part of the wing-cases, covering scarcely one fourth of their area; in this respect it differs from the description (which states that there is no sexual sculpture on the elytra) of the female of *C. explanatus*.

1 (B). **Cybister cavicollis.**

Ovalis, convexus, latus, supra olivaceus; capite, antennis, prothorace elytrisque ad latera testaceis; subtus piceus, abdomine dilutiore; pedibus quatuor anterioribus rufis.

Long. 30, lat. 17½ millim.

Hab. MEXICO, near the city (*Höge*).

Although we have received only one female of this insect it is clearly a distinct species; it resembles *C. explanatus* more than any other member of the genus, but is readily distinguished therefrom by the hind femora not being spinose at the outer angle; this angle is, however, quite acute and even minutely prominent. The upper surface has no sexual sculpture, except that on each side of the thorax near the hind angle

there is a slight depression of the surface, and this depression has a dull lustre and is obscurely strigose. The epipleuræ are rather broad near their termination; there is no trace of a second claw on the hind foot; and the outer posterior part of the hind coxa is densely strigose.

ENHYDRUS (p. 48).

Enhydrus atratus (p. 48).

To the locality Panama, add :—Bugaba (*Champion*).

Mr. Champion captured a large number of specimens of this insect in the low forest-region at Bugaba.

GYRINUS (p. 50).

Gyrinus turbinator (p. 50).

To the Mexican locality given, add :—Llanos de Salazar 10,000 feet (*Höge*).

I have not yet seen a male from Mexico, and am not sure that this insect will prove to be really *G. turbinator*; the female has decidedly a more conspicuous sexual sculpture than the Guatemalan type.

Gyrinus obtusus (p. 50).

Dr. Regimbart considers that Say's description of *G. obtusus* does not refer to the insect to which I applied it, and treats Say's species as one unknown to us.

As this author's work is now the standard authority on the Gyrinidæ, I accept his nomenclature. The localities Parada and Puebla (*Sallé*) have therefore to be transferred to the following species.

2 (A). **Gyrinus plicatus.**

Gyrinus plicatus, Regimb. Ann. Soc. Ent. Fr. 1883, p. 183.
Gyrinus obtusus, huj. op. p. 50 (nec Say).

2 (B). **Gyrinus dimorphus.**

Gyrinus dimorphus, Regimb. Ann. Soc. Ent. Fr. 1883, p. 474[1], and 1886, p. 255[2].

Mexico, Ciudad in Durango[1 2], Ventanas (*Forrer*), Llanos de Salazar 10,000 feet (*Flohr*, *Höge*).

I am not at all sure that I have correctly identified Regimbart's species; if I have, *G. dimorphus* is very closely allied to *G. plicatus*, but has no convexity of the alternate interstices of the elytra, and has the depression close to the side margin just in front of the outer angle of the wing-case not so deep and conspicuous. The Mexican *Gyrini* are, however, very difficult, and it is necessary to have the sexes taken together before satisfactory conclusions can be formed.

4. **Gyrinus plicifer.**

Gyrinus plicifer, Lec. Ann. Lyc. New York, v. p. 209[1]; Regimb. Ann. Soc. Ent. Fr. 1883, p. 153[2].

Hab. North America[1 2].—Mexico, Northern Sonora (*Morrison*).

Though very similar to *G. parcus*, this species is readily distinguished by the clear red epipleuræ, the more shining surface, and the absence of sexual sculpture in the female.

GYRETES (p. 51).

Gyretes leinotus (p. 51).

The Guatemalan examples referred by me to *G. leionotus* belong to the following species:—

1 (a). **Gyretes minor.**

Gyretes minor, Regimb. Ann. Soc. Ent. Fr. 1883, p. 407[1].
Gyretes leionotus, var. *minor,* huj. op.[2]

Hab. Guatemala[1], Torola (*Champion*).

Dr. Regimbart[1] regards the extremely slight differences between this and *G. leionotus* as indicative of two distinct species.

3. **Gyretes guatemalensis.**

Gyretes levis, huj. op. p. 51.
Gyretes guatemalensis, Regimb. Ann. Soc. Ent. Fr. 1883, p. 399[1].

Dr. Regimbart considers[1] our insect probably distinct from *G. levis*, Brullé, and has described it (*l. c.*) from an example I sent to him.

Gyretes acutangulus (p. 52).

To the locality given, add:—Panama, Bugaba, Panama city, San Miguel in the Pearl Islands (*Champion*).

Mr. Champion procured a fine series of this species; though decidedly smaller than the Mexican types, I can find no other difference.

6. **Gyretes mexicanus.**

Gyretes mexicanus, Regimb. Ann. Soc. Ent. Fr. 1883, p. 405[1].

Hab. Mexico[1].

HYDROPHILUS (p. 54).

Hydrophilus ater (p. 54).

To the localities given, add:—Panama, near the city (*Champion*).

4. **Hydrophilus pollens.**

Ovalis, convexus, niger, supra viridi-olivaceus, parum nitidus, pedibus nigro-piceis, antennis palpisque testaceis; prosterni processu profunde fisso, utrinque anterius dente acuminato deorsum spectante; femoribus posterioribus validis; abdomine pubescente, segmento penultimo medio linea lævigata et carinata, posterius in dente libero producta, segmento ultimo medio spatio parvo, anterius angusto lævigato; palpis maxillaribus maris dilatatis.

Long. 30–35 millim.

Hab. Mexico (*coll. Laferté*), Vera Cruz (*Höge*).—South America, Demerara (*Harper*).

Of this species I have before me three examples, and have no doubt that the example from Mexico with the maxillary palpi dilated is the same species as the individual from Demerara with the palpi simple, although in this presumed male there is not the slightest incrassation or peculiarity of the front tarsi, which are quite like those of the female; the second example from Mexico has unfortunately lost the palpi.

H. pollens is one of a group of species distinguished by the prosternum in front being divided into two lobes, by the hind body being nearly entirely covered with pubescence, by the broad hind femora, and by the males possessing peculiar sexual distinctions. The species of this group are rather numerous in South America; but are apparently scarce, and only two or three have been described.

5. **Hydrophilus violaceo-nitens.**

Hydrophilus violaceo-nitens, Jacq. Duv. in Sagra's Hist. fisica polit. y nat. de Cuba, vii. Ins. p. 23 [1]; Chevr. Ann. Soc. Ent. Fr. 1863, p. 205 [2].

Hab. Mexico, Vera Cruz (*Flohr*).—Antilles, Cuba [1] [2].

The two examples of this insect received from Mr. Flohr are extremely mutilated and immature, but I expect they will prove to be the same as the Cuban species, of which only the female appears to be known. If I am correct in this supposition, *H. violaceo-nitens* is closely allied to *H. pollens*, but the colour of its upper surface is less viridescent, the lobes of the prosternum are quite obtuse, and the penultimate two segments are polished along the middle, while the glabrous space on the terminal segment is of oblong rather than triangular shape; the pectoral lamina is thick in front, and bears a remarkably deep depression; all the femora are red, but this may be due to the immature condition of the two examples.

These specimens were met with in the Laguna de los Cocos some time ago; but though sought for since the species has not again been found there.

TROPISTERNUS (p. 54).

Tropisternus mexicanus (p. 55).

To the Mexican localities given, add:—Mazatlan in Sinaloa, San Juan Bautista in Tabasco (*Höge*).

The large number of specimens received show some variation in connection with locality, the dark marks on the upper surface being remarkably extended in the small series from Tabasco; but there is nothing before me to connect the species with *T. collaris*.

Tropisternus nitens (p. 56).

To the localities given, add:—British Honduras, R. Hondo (*Blancaneaux*); Panama, near the city (*Champion*).

9 (a). **Tropisternus sublævis.**

Hydrophilus sublævis, Lec. Proc. Ac. Phil. 1855, p. 368[1].

Hab. North America, Nebraska and Georgia[1].—Mexico, Northern Sonora (*Morrison*).

11 (a). **Tropisternus flavipalpis.**

Tropisternus flavipalpis, Sharp, Trans. Ent. Soc. Lond. 1883, p. 102[1].

Hab. Mexico (*coll. Saunders*)[1].

Tropisternus xanthopus (p. 59).

To the Mexican localities given, add:—Paso del Norte and Santa Clara in Chihuahua, Durango city, Aguas calientes city (*Höge*).

15 (a). **Tropisternus dorsalis.**

Hydrophilus dorsalis, Brullé in Voy. d'Orb. vi. pt. 2, Ins. p. 57, t. 4. f. 6[1].

Hydrophilus limbalis, Lec. Proc. Ac. Phil. 1865, p. 367[2].

Hab. North America, California[2].—Mexico, Mazatlan in Sinaloa (*Höge*), Rio Mescales (*Buchan-Hepburn*).—South America[1].

I think this insect will not prove to be distinct from *H. lateralis*; indeed, two or three of the examples found at Mazatlan are intermediate in colour, and this is the only character I know of to distinguish the two species.

PLEURHOMUS (to follow *Tropisternus*, p. 61).

Pleurhomus, Sharp, Trans. Ent. Soc. Lond. 1883, p. 114.

This genus has been established to include a Brazilian insect, and one of our species formerly placed in *Tropisternus*.

1. **Pleurhomus obscurus.**

Tropisternus obscurus, huj. op. p. 60.

To the locality given, add:—Mexico, Vera Cruz (*Höge*).

HYDROCHARIS (p. 61).

Hydrocharis perfectus (p. 61).

To the locality given, add :—MEXICO, Vera Cruz (*Höge*).

OOCYCLUS (p. 61).

Oocyclus vestitus (p. 62).

To the locality given, add :—PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

If the unique specimen from Chiriqui be not really conspecific with the, likewise unique, Mexican exponent of this interesting species, it is, at any rate, closely allied thereto ; it is, unfortunately, in a very decayed condition.

Oocyclus maculatus (p. 63).

To the locality given, add :—PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

This example is, like that from Guatemala, the only one found in the locality, and the peculiar green spots of the upper surface are indistinct, but I see no other difference.

HYDROBIUS (p. 64).

Hydrobius subcupreus (p. 64).

To the localities given, add :—MEXICO, Jalapa (*Höge*) ; PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Hydrobius armatus (p. 64).

To the localities given, add :—MEXICO, Mazatlan (*Höge*) ; PANAMA, near the city, and San Miguel in the Pearl Islands (*Champion*).

Hydrobius debilis (p. 65).

To the Panama locality given, add :—San Miguel in the Pearl Islands (*Champion*).

PHILYDRUS (p. 66).

Philydrus æqualis (p. 68).

To the localities given, add :—PANAMA, Bugaba, Volcan de Chiriqui, Panama city, San Miguel in the Pearl Islands (*Champion*).

HYDROCOMBUS (p. 70).

Hydrocombus fraterculus (p. 71).

To the Mexican locality given, add :—Northern Sonora (*Morrison*).

These specimens were named *Philhydrus imbellis*, Lec., by Morrison, and that species is probably a close ally of *H. fraterculus* ; examples from California in my collection that I consider to be Leconte's species are, however, distinct from the Mexican insect.

HELOCHARES (p. 74).

Helochares oculatus (p. 74).

To the locality given, add :—Panama, near the city (*Champion*).

Helochares seriatus (p. 76).

Before the localities given, insert :—Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Yautepec (*Flohr*).

Helochares regularis (p. 76).

To the locality Mexico, add :—Aguas calientes city (*Höge*).

DERALLUS (p. 77).

2. **Derallus rudis.**

Lateraliter valde compressus, longitudinaliter convexus, niger, supra æneus, pedibus piceis, antennis, palpis tarsisque anterioribus fusco-testaceis ; elytris seriebus regularibus punctorum, internis basin versus desinentibus, interstitiis crebre punctatis.

Long. 3 millim.

Hab. Mexico, Vera Cruz (*Höge*).

Antennæ yellow, with the elongate club griseous ; palpi sordid yellow, with the elongate terminal joint fuscous. Head closely, the thorax more sparingly, punctate.

This insect is readily distinguished from *D. altus* by the series of punctures on the wing-cases. Nine examples.

BEROSUS (p. 78).

Berosus salvini (p. 79).

To the Mexican localities given, add :—Northern Sonora (*Morrison*), and delete Guanajuato, Puebla, and Toluca (*Sallé*) : also delete the reference to Tab. III. fig. 1, as this represents *B. hoplites*.

The examples from Northern Sonora (nine in number) differ but little from the Guatemalan representatives of the species, the small prominence on the penultimate ventral segment of the male being, however, not always present.

Dr. Horn has recently recorded the occurrence of this species in Texas (Canad. Ent. xvii. p. 139).

1 (A). **Berosus hoplites.** (*B. salvini*, Tab. III. fig. 1.)

Major, supra testaceus, in elytris fusco-maculatus, capite æneo, prothorace dense fortiterque punctato, rugoso, opaco, in medio metallico-bivittato et utrinque maculato ; elytris striatis, rugoso-punctatis, opacis, apicibus spinosis, angulo suturali acuminato ; palpis maxillaribus flavis, apice nigro ; corpore subtus nigro, prothoracis lateribus late testaceis ; pedibus rufo-testaceis, femoribus basi tibiisque apice nigris, tarsis variegatis ; metasterno medio posterius lamina erecta armato.

Long. 8, lat. 4 millim.

Hab. MEXICO, near the city (*Höge*), Guanajuato, Toluca, Puebla (*Sallé*).

This species resembles *B. salvini*, but the individuals are of rather larger size, and are readily distinguishable by the peculiar prominent carina at the apex of the metasternum; and the punctuation of the upper surface is denser and more rugose. The abdominal characters of the male scarcely differ from those of *B. salvini*, but the front tarsi are considerably larger in *B. hoplites*. I had two or three examples of *B. hoplites* before me when I described *B. salvini*, and looked on them merely as an extreme form of that species, and thus one of them was figured as *B. salvini*. The examples now received of both species from Mexico show that the two are distinct.

Berosus truncatipennis (p. 80).

To the localities given, add :—MEXICO, San Juan Bautista in Tabasco (*Höge*), Ventanas *Forrer*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

The two examples from the State of Panama are unusually large and may be distinct, but they are in such a decayed condition that they will not bear manipulation.

Berosus griseus (p. 80).

Before the locality given, insert :—MEXICO, San Juan Bautista in Tabasco (*Höge*).

3 (A). **Berosus flavipes.**

Oblongus, nitidus, testaceus, capite superne aureo, prothorace in medio tenuiter fusco-bivittato, elytris fusco-maculatis; capite subtus nigricante, pectore abdomineque infuscatis; elytris ad apicem communiter emarginatis, angulo suturali obtuso, utrinque dente parvo armatis.

Long. $5\frac{1}{2}$–$6\frac{1}{2}$ millim.

Hab. MEXICO, Mazatlan (*Höge*), Presidio (*Forrer*).

The palpi and antennæ are flavous. The head is rather sparingly punctured. The thorax is finely punctate on the middle, the punctuation being double (that is, a very minute sculpture or punctuation is present in addition to the more visible punctures); at the sides the punctures are coarser. The elytra are deeply striate at the sides and behind, but at the base the striæ are feeble, and are, indeed, replaced by serial punctures; the interstices are coarsely punctured at the sides and behind. The sexes are difficult to distinguish, but the male has the two basal joints of the front tarsi a little dilated. The ventral structure is similar in the two sexes: there is a small excision of the last ventral plate, and the excision is armed at the base in the middle with two minute approximate teeth.

We have received six examples from Mazatlan of this species; and, from the same locality, two others that are slightly larger in size (7 millim. long), and have the bases of the femora darker and the sutural angle of the elytra slightly acute; whether the latter is a variety or a distinct species I cannot decide at present.

10 (A). **Berosus dispar.**

Brevis, mare nitido, femina opaca, fortiter punctatus, testaceus, capite metallescente, prothorace in medio vix fusco-bimaculato, elytris parce obsoleteque maculatis ; capite subtus nigricante, pectore abdomineque fusco-rufis. Long. 4–5 millim.

Hab. MEXICO, Chihuahua city, Mexico city (*Höge*).

Head densely and coarsely punctate, with a distinct fine carina on the middle of the vertex; palpi and antennæ pallid yellow. Thorax coarsely and rather closely punctured. Elytra deeply striate, the interstices coarsely punctured. Legs entirely yellow. Terminal ventral plate slightly excised, with a single angular prominence in the middle of the base of the excision. In the male the upper surface is shining, the basal joints of the front tarsi are slightly incrassate, and the apices of the elytra are quite simple; the basal ventral segment is carinate throughout its whole length, and there are short prominences or carinæ on each of the following three segments. In the female the upper surface is opaque, owing to the existence of an additional minute punctuation, and the apices of the elytra are slightly prolonged, so that the sutural angle is acute; the carina on the basal ventral segment scarcely extends to the hind margin, and there are no prominences on the following segments. Five examples.

10 (B). **Berosus debilis.**

Minor, brevis, capite prothoraceque metallescentibus, hoc flavo-marginato, elytris sordide testaceis, parce nigro-maculatis ; subtus niger, prothorace marginibus testaceis ; antennis, palpis pedibusque testaceis, palporum apice femorumque basi nigris, antennarum clava grisea. Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Tehuantepec (*Höge*).

Head and thorax rather closely and coarsely punctured, not at all rugose, metallic; the latter with yellow margins, the yellow colour on the front margin irregular, owing to its extending farther backwards on each side of the middle, the basal yellow margin extremely slender. Elytra moderately deeply striate, the interstices rather sparingly punctured; of a sordid yellow or griseous colour, with four small black spots on the disc, placed in a row longitudinally, and also with a humeral spot, and a lateral spot about the middle. Basal ventral segment with a carina on the middle, extending the entire length of the segment; apical segment with a rather deep narrow excision. Male with the basal joints of the front feet moderately dilated.

HEMIOSUS (p. 84).

Hemiosus maculatus (p. 85).

To the locality given, add :—MEXICO, La Noria in Sinaloa (*Höge*) ; PANAMA, Bugaba (*Champion*).

A single example has been received from each of these distant localities.

CHÆTARTHRIA (p. 86).

Chætarthria glabra (p. 87).

To the locality given, add:—PANAMA, San Miguel in the Pearl Islands (*Champion*).

Chætarthria læticula (p. 87).

To the locality given, add:—PANAMA, San Miguel in the Pearl Islands (*Champion*).

HELOPHORUS (p. 85).

3. **Helophorus minutus.**

Helophorus minutus, Oliv. Ent. iii. n. 38, p. 7, t. 1. f. 6[1]; Rey, Hist. Nat. Col. Fr., Palpicornes, 2nd ed. p. 179[2].

Hab. EUROPE [1] [2].—MEXICO, Northern Sonora (*Morrison*), Chihuahua city, Durango city (*Höge*).

I am unable to find any character that satisfactorily separates the series found by Höge and Morrison in Mexico from this common European species.

4. **Helophorus —— ?**

Hab. MEXICO, Northern Sonora (*Morrison*).

A single example of a very obscure species, possibly an extreme variety of *H. regularis*, but more likely distinct.

5. **Helophorus —— ?**

Hab. MEXICO, near the city (*Höge*).

A single example in a very dirty condition, apparently closely allied to *H. minutus*, but on account of its larger size (5 millim. long) probably distinct.

OCTHEBIUS (p. 90).

1 (A). **Octhebius aztecus.**

Minor, niger, capite, prothoraceque metallescentibus, elytris fusco-testaceis, antennis, palpis pedibusque testaceis, illarum clava grisea; prothorace sublævigato, medio canaliculato, utrinque parum profunde bi-impresso; elytris seriatim punctatis.

Long. $1\frac{7}{8}$ millim.

Hab. MEXICO, near the city (*Höge*).

Head brassy in colour, with two moderately large impressions on the vertex. Thorax nearly as long as broad, without distinct punctures, largely depressed near the anterior angles; with a distinct channel along the middle, on each side of which is a faint longitudinal impression, and in front of this with an indistinct small fovea. Elytra with very regular series of punctures, without pubescence.

Two examples only have been received of this obscure little *Octhebius*. It appears to be exceedingly closely allied to the S. European *O. parvulus*, Rey (not our *O. parvulus*; Rey's species must be renamed); but is a little larger, and has the elytra more coarsely punctured, so I do not think proper to record it under the name of the European species. The two examples have the sides of the thorax covered with some white substance.

CYCLONOTUM (p. 94).

1 (A). **Cyclonotum abdominale.**

? *Sphæridium abdominale*, Fabr. Ent. Syst. i. p. 79 [1].
Cyclonotum abdominale, Muls. Ann. Soc. Agr. Lyon, 1844, p. 179 [2].
Dactylosternum abdominale, Gemm. & Har. Cat. Col. ii. p. 496 [3].
Dactylosternum rousseti, Woll. Ins. Mader. p. 100, t. 3. f. 1 [4].
? *Cœlostoma insulare*, Cast. Hist. Nat. Ins. Col. ii. p. 59.
Dactylosternum insulare, Rey, Hist. Nat. Col. Fr., Palp., 2nd edit. p. 307.

Hab. MEXICO, San Juan Bautista and Teapa in Tabasco (*Höge*).—BRAZIL [1 2 3]; ANTILLES [2]; MADEIRA [4]; MADAGASCAR; &c.

Cyclonotum dispar (p. 95).

To the Mexican locality given, add:—Tula in Hidalgo, Teapa in Tabasco (*Höge*).

4 (A). **Cyclonotum externum.**

Rotundato-ovale, convexum, nitidum, nigrum, pedibus piceis, antennarum basi palpisque testaceis, tarsis rufis, antennarum clava opaca; supra crebre fere subtiliter punctatum; elytris seriebus punctorum majorum impressis, internis longe ante basin desinentibus, punctis basin versus subtilioribus.
Long. $4\frac{1}{2}$–5 millim.

Hab. PANAMA, Bugaba (*Champion*).

Closely allied to *C. centrale*, from which it is distinguished chiefly by the punctures of the elytral series being not so large, especially those in front; in respect of the size of the punctures it is intermediate between *C. centrale* and *C. tibiale*. Sixteen examples.

6. **Cyclonotum posticatum.**

Rotundato-ovale, convexum, nitidum, nigrum, pedibus rufis, antennis, palpis tarsisque testaceis; prothorace lævigato; elytris sat crebre, fortiter punctatis, ad apicem stria suturali abbreviata impressa.
Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

This insect resembles a *Phænonotum* rather than a *Cyclonotum* of the '*Dactylosternum* group'; it may be distinguished from the species of the former genus by the existence of a short sutural stria, and from *Dactylosternum* by the absence of serial punctures. The shape of the mesosternal lamina is peculiar, being narrow and linear, but margined in front. Six examples, in very decayed condition.

PHÆNONOTUM (p. 97).

Phænonotum dubium (p. 98).

To the localities given, add :—MEXICO, San Juan Bautista in Tabasco, Tlacotalpam, Tehuantepec (*Höge*), Yautepec (*Flöhr*); PANAMA, Bugaba, Volcan de Chiriqui, David (*Champion*).

The few examples from the State of Panama have the surface rather more sparingly punctate; but the differences are not sufficient to render necessary their separation at present.

Phænonotum apicale (p. 98).

Before the localities given, insert :—MEXICO, Cuernavaca (*Höge*).

Phænonotum rotundulum (p. 100).

To the Panama locality given, add :—San Miguel in the Pearl Islands (*Champion*).

PEROCHTHES (p. 101).

2. **Perochthes lævis.**

Subhemisphæricus, piceus, nitidus, pedibus rufis, antennis palpisque flavis; elytris subtiliter sat crebre punctatis. Long. 2 millim.

Hab. PANAMA, Bugaba (*Champion*).

Readily distinguished from *P. globulus* by the absence of the deep striæ on the elytra. The thorax is almost impunctate. The elytra have their discoidal portion sparingly and very finely punctate, the lateral portions rather more distinctly so; and near the margin, rather behind the middle, there are a few rather larger punctures arranged in a linear manner, so as to form very short indistinct series. Six examples.

CERCYON (p. 103).

Cercyon prætextatus (p. 107).

To the locality Mexico, add :—Jalapa, San Juan Bautista in Tabasco (*Höge*).

8 (A). **Cercyon æqualis.**

Ovalis, subdepressus, niger, supra fusco-testaceus, capite nigro, antennis, palpis pedibusque testaceis, illarum clava fusca; capite prothoraceque crebre punctatis; elytris profundius striatis, striis crenatis. Long. 2½ millim.

Hab. MEXICO, Jalapa (*Höge*).

This insect is very easily distinguished by the regular and extremely deep striation of the elytra, the striæ being very deep at the base as well as at the apex; the sixth stria is much abbreviate at the shoulder. The mesosternal lamina is broad, but narrowed behind, and not at all consolidated with the metasternum. Two examples.

Cercyon variegatus (p. 107).

To the localities given, add:—PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

9 (A). **Cercyon alticola.**

Ovalis, sat convexus, testaceus, capite prothoraceque in medio nigris, antennarum clava fusca, palporum articulo ultimo nigricante; elytris striatis, striis ad apicem vix profundioribus, interstitiis obsolete parce punctatis.
Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

Head and thorax with numerous rather large but extremely shallow punctures; elytra striate, the striæ not punctured, the interstices obsoletely punctured.

On account of its colour this species resembles *C. variegatus*, but is narrower, with much finer striation of the elytra, and different punctuation on the head and thorax; there is no trace of a lateral mark outside the medial black mark on the thorax. Four examples.

PELOSOMA (p. 109).

1 (A). **Pelosoma collare.**

Late ovale, sat convexum, rufescens, elytris nigricantibus, antennis palpisque pallide flavis; supra sat crebre subtiliter punctatum; elytris subtiliter striatis, striis posterius parum profundius impressis.
Long. $2\frac{1}{2}$, lat. $1\frac{5}{8}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Distinguished by the very delicate striation of the elytra, the striation consisting of series of punctures connected by extremely fine lines; the punctures of the three or four series near the suture are extremely fine, but those near the sides are larger; the marginal series is much sinuate or crooked near the base; the interstitial punctuation is scanty and very fine. The under surface is more or less picescent; frequently the upper surface is entirely red.

Numerous examples. According to Mr. Champion this insect and the allied species are found at the sap of trees.

1 (B). **Pelosoma liodes.**

Subhemisphæricum, nitidum, parce punctatum, fulvo-testaceum; elytris striatis, striis posterius profundioribus.
Long. $2\frac{1}{4}$, lat. $1\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Punctuation of the head and thorax rather distant but distinct. Internal striæ of the elytra very fine at the base, but distinctly impressed at the extremity; the interstitial punctuation very fine and distant.

This is shorter in form than the other species of the genus, and is remarkable on account of the very scanty punctuation of the elytra. Three specimens.

Pelosoma sordidum (p. 109).

To the localities given, add :—PANAMA, Bugaba (*Champion*).

3 (A). **Pelosoma ovulum.**

Ovale, sat convexum, crebre punctatum, rufescens, nitidum ; elytris subtiliter seriatim punctatis, substriatis.
Long. $2\frac{1}{2}$, lat. $1\frac{1}{4}$ millim.

Hab. MEXICO, Amecameca (*Höge*).

This obscure little insect is no doubt quite distinct from the other species of our region, as it has the mesosternal process considerably more slender. The series of punctures on the wing-cases are not in the least deeper behind, and the outer series are scarcely coarser than the sutural ; the marginal series is not crooked. The punctures of the thorax and of the elytral interstices are distinct and rather numerous. Three examples.

NITIDULODES (p. 112).

Nitidulodes jansoni (p. 112).

To the locality given, add :—PANAMA, Bugaba (*Champion*).

Found at the sap of fallen trees in the forest-region of the low country.

OOSTERNUM (p. 112).

Oosternum costatum (p. 113).

To the localities given, add :—PANAMA, David (*Champion*).

MEGASTERNUM (p. 113).

Megasternum strigicolle (p. 113).

Before the localities given, insert :—MEXICO, Cordova (*Höge*).

HETEROCERUS (p. 116).

1 (A). **Heterocerus americanus.**

Minor, angustus, parallelus, testaceus, corpore subtus capiteque plus minusve infuscatis ; omnino subtilissime punctulatus, pubescens, opacus.
Long. 3 millim.

Hab. NORTH AMERICA, Arizona (*Morrison*).—MEXICO, Northern Sonora (*Morrison*), Yautepec in Morelos (*Flohr*).

This insect is very closely allied to *H. debilis*, but is larger and not quite so convex, and possesses an extremely fine basal margin on each side of the thorax. *H. americanus* still more nearly resembles *H. flavidus* of South Europe ; but that species is scarcely so elongate, and has the thoracic margin more distinct, though the differences are very

slight; the European species is also usually more black in colour beneath; both possess a femoral line on the metasternum.

1 (B). **Heterocerus vilis.**

Minor, angustulus, sordide testaceus, opacus, omnino subtilissime punctulatus; prothorace rufescente, basin versus plus minusve infuscato; elytris vage fusco signatis.
Long. vix 4 millim.

Hab. NORTH AMERICA, Arizona (*Morrison*).—MEXICO, Northern Sonora (*Morrison*), Yautepec in Morelos (*Flohr*).

A very obscure insect apparently closely allied to *H. mexicanus*, but rather smaller and narrower, with still finer sculpture, and with the pronotum in part, if not entirely, red; the marks of the elytra are indefinite and also variable in their extent; and the legs are entirely yellow. There is a fine basal margin on each side of the thorax, and a femoral line on the metasternum. I do not observe any sexual distinctions.

3 (A). **Heterocerus velutinus.**

Latiusculus, niger, elytris signaturis testaceis parvis, pedibus fusco-testaceis; opacus, omnino subtilissime punctulatus, densius griseo-pilosus.
Long. 4–5 millim.

Hab. MEXICO, near the city (*Höge*).

Broader than *H. simplex*, and distinguished by the excessively fine sculpture and dense griseous pubescence, by the small size of the yellow marks, and by the black antennæ. The yellow marginal band of the wing-cases is extremely slender, and gives off near the base a slender branch directed obliquely backwards; the other yellow marks are situated as usual, but are very slender; usually there is a yellow spot at the base on each side of the scutellum, but this spot is occasionally almost or quite absent; and sometimes the other yellow marks can be scarcely detected. There is an extremely fine basal margin on each side of the thorax, but no femoral line on the metasternum. The male has the mandibles longer and angulate externally, and the elongate labrum abruptly narrowed about the middle of its length.

3 (B). **Heterocerus cognatus.**

Sat elongatus, subparallelus, flavescens, pectore, capite, prothorace elytrisque fuscis, his signaturis transversis, magnis, testaceis; subtilissime punctulatus, brevissime griseo-pilosus, opacus.
Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. MEXICO, Manzanillo in Michoacan (*Höge*).

This insect is very similar to *H. mexicanus*, but is rather larger, and there is no femoral line on the metasternum; it resembles still more closely the European *H. femoralis*, but is of rather more elongate form, and the legs are clear yellow. There is an excessively fine basal margin on each side of the prothorax; the lateral margin of the elytra is rather broadly yellow, and the yellow irregular transverse marks are

connected with it. I do not see any sexual distinctions in the six examples found by Herr Höge.

DRYOPS (p. 119).

Dryops puncticollis (p. 121).

To the locality given, add :—North America, Arizona (*Morrison*).—Mexico, Northern Sonora (*Morrison*), Las Vigas (*Flohr*).

PELONOMUS (p. 122).

Pelonomus palpalis (p. 122).

To the Panama locality given, add :—Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species, described from two examples, has since been found in abundance, both at David and on the Volcan de Chiriqui.

PARNUS (p. 123).

Parnus pusillus (p. 123).

Erase the locality Panama, Bugaba, as the specimen is a female of *P. centralis*.

2 (a). **Parnus centralis.**

Elongato-ovalis, parum convexus, niger, opacus, pube fusca brevissima densa setulisque erectis vestitus; pedibus rufis; elytris in parte basali parce minus fortiter punctatis.

Long. $3\frac{5}{8}$ millim.

Mas tarsis anterioribus subtus serratis, articulo quinto longius angulato.

Hab. Panama, Bugaba, Volcan de Chiriqui 4000 to 6000 feet, Tolé (*Champion*).

This species is very similar to *P. pusillus*, but the male has peculiarly formed front tarsi, joints 2–5 being acuminate beneath; the angle on the fifth joint is placed in the middle and is very large (this distinguishes the insect from *P. mexicanus*, where the angle on the fifth joint is small, but that of the fourth elongate; here the reverse is the case). In general characters the insect is scarcely distinguishable from *P. mexicanus*, but is not quite so large, and the minute clothing of the upper surface is a little denser, while the erect hairs are a little shorter.

2 (b). **Parnus major.**

Elongatus, parum convexus, niger, pube flavo-grisea brevissima dense vestitus cumque setulis erectis, sat elongatis; elytris basin versus sparsim parum fortiter punctatis; pedibus rufis.

Long. $4\frac{1}{4}$ millim.

Hab. Panama, Los Remedios, Tolé (*Champion*).

The male in this species has the tarsi armed beneath with long, fine hairs, most conspicuously so on the hind feet. The insect is extremely similar to *P. pusillus*, but

is considerably larger, and differs by this male character. *P. punctipennis* has a similar male character, but the tarsi are rather shorter and their clothing somewhat longer; it also differs in the sculpture and clothing of the upper surface of the body. From *P. centralis* the species may be distinguished by the rather larger size, by the differently formed male tarsi, and also by the tarsi in the female being considerably larger than they are in the corresponding sex of *P. centralis*.

HEXANCHORUS (p. 127).

Hexanchorus gracilipes (p. 128).

To the locality given, add:—PANAMA, Bugaba (*Champion*).

HETERELMIS (p. 130).

4. **Heterelmis longulus.**

Major, elongatus, convexus, niger, parce griseo-setosus, antennis tarsisque rufis; prothorace elongato, medio transversim depresso; elytris seriatim punctatis.
Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Salazar (*Flohr*, *Höge*).

Thorax quite as long as broad; with a very conspicuous depression across the middle, causing a distortion of the intra-lateral carina, and a slight sinuation of the outer margin. Elytra with the series of punctures rather coarse, the setosity unusually distinct; the two intra-lateral series of granules fine and not very distinct, the upper one especially being indistinct. Legs elongate.

This insect has the terminal joint of the maxillary palpus longer than in the other species of the genus.

CYATHOCERUS (p. 142).

Cyathocerus horni (p. 144).

To the localities given, add:—PANAMA, Peña Blanca (*Champion*).

ALEOCHARA (p. 146).

1 (A). **Aleochara stygialis.**

Sat lata, nigra, elytris ad apicem prope suturam macula parva testacea, pedibus fusco-testaceis; fortiter punctata; antennis brevibus, latis, subfusiformibus.
Long. 7–8 millim.

Hab. MEXICO, Zapotlan, Colima (*Höge*).

Antennæ piceous at the base; fourth joint strongly transverse, but only about half as broad as the fifth, the latter being rather broader than the terminal joint; joints 5–10 very strongly transverse. Thorax strongly transverse, narrower in front, coarsely and closely

punctate. Elytra scarcely so long as the thorax, closely and rather coarsely punctate; on each at the apex near the suture is an indefinite yellow spot. Hind body entirely black, shining, coarsely and rather closely punctured. Legs infuscate-yellow.

This species is an ally of *A. fuscipes*, Grav. The two examples received are both of one sex, and have the dorsal plate of the terminal segment simple, slightly rounded behind, the ventral plate less truncate, being more prolonged in the middle as if forming one half of a broad oval figure.

10 (A). **Aleochara repetita.**

Gracilis, subopaca, nigricans, antennarum basi pedibusque testaceis; elytris brunneis, circa scutellum maculaque magna laterali nigris, quam prothorax brevioribus; abdomine acuminato, ex parte majore rufescente, minus dense et subtiliter punctato, maris margine posteriore minute serrato.

Long. $4\frac{1}{2}$–6 millim.

Hab. PANAMA, San Feliz (*Champion*).—AMAZONS, Pará (*coll. Sharp*).

This insect is very closely allied to *A. oxypodia*, but the male is distinguishable by the hind margin of the last dorsal plate being minutely serrate. The colour is more extensively rufescent, especially on the hind body, than it is in *A. oxypodia*, and this allows the females of the two to be discriminated, as does also the punctuation of the hind body, which is a little coarser and less close than it is in the allied species. The female has the last dorsal plate deeply emarginate in the middle; but there is no depression on the penultimate segment, and no trace of lobe on the hind margin of the antepenultimate. Found in dung (*Champion*).

Aleochara simulatrix (p. 151).

To the locality given, add:—PANAMA, San Feliz (*Champion*).

13 (A). **Aleochara hilaris.**

Fulvo-testacea, capite abdomineque in medio nigris, prothorace elytrisque subtiliter punctatis, pedibus flavis, abdomine nitido, parce fortiter punctato.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

A species with rather slender antennæ and not apparently very closely allied to any other known to me, though somewhat near *A. miradoris*, from which it is readily distinguished by its black head. Antennæ with the fourth joint transverse, shorter and a little narrower than the fifth; joints 5–10 similar to one another, each slightly transverse; terminal joint elongate, nearly three times as long as the tenth. Thorax transverse, a little narrowed in front, finely punctate. Elytra not so long as the thorax, rather closely and finely punctured, scarcely infuscate at the outer angle. Hind body only sparingly punctate; terminal two segments clear yellow, the preceding two blackish.

The unique example is probably a male, the terminal ventral plate being rounded; the last dorsal plate truncate, apparently with a minute scarcely visible serration.

17. **Aleochara peltata.**

Aleochara peltata, Er. Gen. et Spec. Staph. p. 172[1].

Hab. Mexico[1].

We have not as yet received any species agreeing with this description[1], and I am inclined to suppose it may prove to be not a true *Aleochara*.

MASEOCHARA (p. 154).

4 (A). **Maseochara högei.**

Subparallela, opaca, abdomine subnitido, nigro, elytris disco vage rufescente; griseo-pubescens, obsolete punctata; prothoracis angulis posterioribus obtusis.
Long. 6–7 millim.

Hab. Mexico, near the city, Tula, Cholula in Puebla (*Höge*).

Distinguished from the other species of the genus by the elytra being obscurely rufescent, with the sides nearly or quite black. The basal joint of the antennæ is piceous, and the penultimate joints are slightly transverse. The thorax is transversely quadrate, its sides narrowed behind, the hind angles quite distinct though very obtuse, the surface very dull, the punctuation very obsolete. Elytra scarcely so long as the thorax, finely punctate. Hind body parallel, with fine punctuation. Legs nearly black, the tarsi sordid red. The male has six teeth on the hind margin of the last dorsal plate.

POLYLOBUS (p. 158).

2. **Polylobus flavescens.**

Parum elongatus, posterius acuminatus, flavo-testaceus, abdomine nigricante dense subtiliter punctato.
Long. $2\frac{1}{2}$ millim.

Hab. Mexico, Zacualtipan in Hidalgo (*Höge*).

Antennæ short, much thickened externally, the base slender; joints 7–10 transverse; terminal joint short, obtuse. Head short, only about half as broad as the thorax. Thorax strongly transverse, the base rounded, the surface very finely punctulate. Elytra rather longer than the thorax, closely and very finely punctulate. Hind body narrowed from the base to the apex; black, with the margins of the segments more or less yellow, the basal segments almost entirely of that colour; very closely and regularly punctate. The male has a minute carina along the middle of the terminal and penultimate dorsal plates.

As in the case of *P. advena* I can only see four joints in the front feet of this insect, so that its systematic position is doubtful.

PHLŒOPORA (p. 164).

13. **Phlœopora lævigata.**

Depressa, lævigata, nitida, fusco-testacea, antennarum basi palpisque testaceis, pedibus flavis. Long. 2½ millim.

Hab. Panama, Tolé (*Champion*).

Antennæ short, thicker externally; fourth joint small, joints 5–9 transverse (the terminal two joints missing). Head broad and short, transversely quadrate, the sides a little narrowed behind, the hind margin truncate; the surface smooth, shining, and impunctate, piceous in colour. Thorax a little narrowed behind, about as long as broad, the front margin rounded; the surface shining and impunctate, fusco-testaceous in colour. Elytra pallid yellow, rather longer than the thorax, shining and impunctate. Hind body slender, with few and indistinct punctures; fusco-testaceous, the penultimate segments a little darker. Legs yellow, short.

This is a remarkable and very distinct species of the genus; the depressed form and polished surface distinguish it from all others.

14. **Phlœopora grandis.**

Elongata, haud depressa, nigra, sat nitida, antennarum basi pedibusque fusco-rufis; fortiter punctata; prothorace elongato. Long. 5½ millim.

Hab. Mexico, Huitzo in Oaxaca (*Höge*).

Antennæ stout; fourth joint as long as broad, joints 5–10 transverse, the last of them very distinctly so. Head long and rather narrow, sparingly and rather coarsely punctate. Thorax rather longer than broad, narrower than the elytra, nearly straight at the sides, rather coarsely and not densely punctured. Elytra longer than the thorax, rather coarsely and closely punctate. Hind body sparingly punctate; segments 3–5 deeply depressed at the base. One example.

TINOTUS (p. 170).

Tinotus flavescens (p. 171).

To the locality given, add:—Mexico, near the city (*Höge*); Guatemala, San Gerónimo (*Champion*).

The four examples now obtained differ from the type in being rather larger and darker in colour, but the distinctions do not warrant the establishment of a species at present.

HOMALOTA (p. 172).

43 (A). **Homalota ornatula.**

Rufo-testacea, capite, pectore abdomineque in medio nigris, antennis medio fusco; opaca, subtiliter punctata; abdomine parce punctato, nitido.
Long. $2\frac{1}{4}$ millim.

Hab. PANAMA, David (*Champion*).

Antennæ moderately long and stout; base yellow, the middle joints infuscate, the terminal one again more pallid; joints 5–10 slightly transverse, the eleventh joint nearly twice as long as the tenth. Head black, very feebly punctate. Thorax much broader than long, even, very finely punctate. Elytra a little longer than the thorax, more distinctly punctate. Hind body sparingly punctate. Legs clear yellow.

This is not very close to any other species; in colour it is somewhat similar to *H. championi*, but it is only half the size and differs in several points of form and punctuation. I have only two examples before me, and they do not exhibit any sexual character.

HOPLANDRIA (p. 219).

6 (A). **Hoplandria arguta.**

Flavicans, antennis ex parte majore, capite elytrisque angulis exterioribus nigricantibus, prothorace abdomineque nitidis, elytris crebre subtiliter punctatis.
Long. 4 millim.
Mas elytris ad marginem posteriorem processu acuminato erecto, abdomine segmento sexto longius carinato.

Hab. MEXICO, Huitzo in Oaxaca (*Höge*).

Antennæ with the base sordid yellow, the following joints black; the penultimate joints transverse; the terminal joint elongate, acuminate, yellow. Thorax shining, very finely pubescent, scarcely visibly punctate. Elytra rather closely and finely punctate; in the male with an acute process near the outer hind angle. Hind body remarkably polished and shining, but at the extreme base of each segment, except the terminal, with a dense fine punctuation. In the male the terminal dorsal plate is provided with a large carina more elevated behind. Three examples.

MERONA (p. 229).

I find this name is preoccupied in zoology and propose therefore to substitute *Meronera* for it.

DIESTOTA (p. 247).

1 (A). **Diestota civica.**

Elongata, subdepressa, subparallela, nigricans, antennarum basi, pedibus abdominisque basi et apice testaceis, elytris testaceo-brunneis; subopaca, dense subtiliter punctata, abdomine parce punctato.
Long. 4 millim.

Hab. MEXICO, near the city (*Höge*).

Antennæ elongate, none of the joints transverse. Head black, dull, very finely punctate, much narrowed behind. Thorax strongly transverse, much narrower than the elytra, a little narrowed behind, with a very obsolete impression at the base in the middle; the surface dull, very minutely punctate. Elytra ample, much longer than the thorax, densely and finely punctate. Hind body with the basal three segments yellow, the next two black, the apex again yellow; the basal segments finely and not closely, the apical segments still more sparingly, punctate. In the male the hind margin of the terminal dorsal plate ends in six equidistant teeth, the outer one of which on each side is considerably longer than the others.

This insect is very like a *Homalota* in appearance, and the size is considerably larger than that of any other species of *Diestota*. Only one example has been obtained.

4 (A). **Diestota homalotoides.**

Parum elongata, rufula, abdomine ante apicem nigricante, antennis ante apicem piceis; evidenter pubescens, subtiliter punctata.
Long. 2 millim.

Hab. PANAMA, Peña Blanca 3000 to 5000 feet (*Champion*).

Antennæ moderately long and stout, a little thicker externally, the penultimate joints slightly transverse. Head rather large, nearly as broad as the thorax, obsoletely punctate. Thorax much narrower than the elytra, transverse but not strongly so. Elytra longer than the thorax, closely and finely punctate, rather densely and distinctly pubescent. Hind body sparingly punctate, distinctly pubescent.

This obscure little insect is not very similar to any other of our species; I do not observe any sexual mark on the three examples obtained of it.

GYROPHÆNA (p. 254).

5 (A). **Gyrophæna æqualis.**

Subdepressa, nitida, fere lævigata, testacea; antennis fuscis, sat brevibus, articulis 5°–10^{m} leviter transversis.
Long. 2 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ rather short and stout, fuscescent; joints 3 and 4 small, 5–10 differing little from one another and each slightly transverse. Head small. Thorax strongly transverse, being twice as broad as long, almost impunctate. Elytra short, but longer than the thorax, almost impunctate, and with very scanty pubescence. Hind body impunctate. The male has two small tubercular elevations on the penultimate dorsal plate; and the hind margin of the terminal plate is armed with two rather stout, not very distant, strongly curved teeth. Two examples.

This little insect has quite the appearance of the ordinary European species of the genus, but is not very closely allied to any other of our region.

11. **Gyrophæna zunilensis.**

Gyrophæna discoidalis, huj. op. p. 259 (nec Fauvel).

14 (A). **Gyrophæna convexa.**

Gyrophæna convexa, Sharp, Trans. Ent. Soc. Lond. 1876, p. 75 [1].

Hab. PANAMA, Bugaba, Caldera (*Champion*).—SOUTH AMERICA, Amazons valley [1].

This species was incidentally mentioned by me (*ante* p. 261), and we have now received three male examples that apparently belong to it.

BAMONA (p. 287).

In giving the characters of this genus I omitted to state that the claws are abruptly bent so as to be almost angulate.

Bamona gracilis (p. 288).

To the locality given, add:—PANAMA, San Feliz (*Champion*).

7 (A). **Bamona plana.**

Subdepressa, subparallela, dense subtiliter punctata, brevissime evidenter pubescens, opaca, fusco-rufa (colore variabile), pedibus flavis; prothorace quadrato; tarsis brevibus.

Long. 3–3½ millim.

Hab. PANAMA, Peña Blanca (*Champion*).

Antennæ rather long, only slightly thicker externally, the third joint longer than the second, each joint longer than broad. Head rather narrower than the thorax; this latter quadrate, narrower than the elytra, flat, unimpressed. Elytra considerably longer than the thorax. Hind body very feebly punctate at the base, the apex smooth.

Closely allied to *B. parallela*, but with longer elytra, and a rather longer and narrower thorax.

OLIGOTA (p. 293).

3. **Oligota lævigata.**

Oligota polita, huj. op. p. 293 (nec Sharp, Trans. Ent. Soc. Lond. 1880, p. 45).

ERCHOMUS (p. 298).

Erchomus segnis (p. 301).

To the localities given, add:—MEXICO, near the city (*Höge*).

TACHINODERUS (p. 307).

1 (A). **Tachinoderus remotus.**

Nigerrimus, nitidus, antennarum basi pedibusque rufis; subtilissime punctato; abdomine dense punctato, subopaco.

Long. 7 millim.

Hab. MEXICO, Tula in Hidalgo, Acapulco (*Höge*).

This species is smaller than *T. grandis*, and easily distinguished by the colour of the legs, and the greater convexity of the upper surface; the mesosternal lamina, moreover, is more largely developed, its anterior portion being more prominent, and flavescent in colour. Only two examples have been met with; they are females, and the abdominal structure is similar to that of the same sex of *T. grandis*, except that the laciniæ are longer and more slender.

TACHINUS (p. 309).

Tachinus alticola (p. 310).

To the locality given, add:—MEXICO, Huitzilac, Amecameca (*Höge*).

The two examples now received from Mexico being females, while the original type from Guatemala is a male, some doubt exists as to this determination.

TACHYPORUS (p. 311).

5. **Tachyporus tarsalis.**

Niger, nitidus, prothoracis lateribus, elytrorum apice, antennis tarsisque testaceis.
Long. 4½ millim.

Hab. MEXICO, Salazar (*Höge*).

Antennæ elongate, thickened towards the extremity. Head and thorax very shining, black, the latter broadly testaceous at the hind angles, this colour extending forward along the sides and also along the base. Elytra longer than the thorax, finely punctate and pubescent. Hind body black, finely punctured. Legs black, the tarsi pallid yellow.

This species bears considerable resemblance to *T. argutus*, but is readily distinguished by the colour of the legs. Only one specimen has been received

MEGACRONUS (p. 317).

4 (A). **Megacronus mexicanus.**

Gracilis, rufo-testaceus, pectore, elytris abdomineque apice excepto fuscescentibus; antennis parum crassis; elytris regulariter, seriatim fortiter punctatis.
Long. 5 millim.

Hab. MEXICO, Sayula in Jalisco (*Höge*).

Antennæ rather short and not stout, but at the apex considerably thickened; joints 9 and 10 transverse. Head and thorax pale red. Elytra longer than the thorax, each with six or seven regular series of setigerous punctures. Hind body sparingly punctured, pale red at the extremity.

There is little to distinguish this species from *M. meridionalis*, except differences in colour, which are not very important, and the much more slender antennæ.

ACYLOPHORUS (p. 324).

4 (A). **Acylophorus versicolor.**

Niger, nitidus, abdomine versicolore ante apicem obscure rufo-cingulato, antennarum basi pedibusque rufo obscuris; scutello crebre punctato.
Long. 9 millim.

Hab. MEXICO, Tehuantepec (*Höge*).

Similar to *A. simplex*, but readily distinguished by the closely punctate scutellum and the colour of the hind body, and differing also in numerous other particulars. The antennæ are rather long, and the base of the elongate basal joint is brown. The head is dull beneath, pubescent, and sparsely punctate, the parts of the mouth red, with the apical joint of the maxillary palpi darker. The elytra are longer than the thorax, closely and rather closely punctate. The hind body has fulgid reflections, is densely punctured and very strongly pubescent, the spinose setæ of the hind margins of the segments largely developed; the hinder part of the penultimate segment and the base of the following segment are red, the white membranous border of the penultimate segment very distinct. One example.

QUEDIONUCHUS (p. 336).

Quedionuchus impunctus (p. 336).

Add:—Var. β. Abdomine rufo-testaceo.

Hab. MEXICO, Ciudad in Durango (*Höge*).

A small series of this variety was obtained: both it and the form with red elytra may, perhaps, prove to be distinct.

CYRTOTHORAX (p. 340).

Cyrtothorax salvini (p. 341). (Tab. VIII. fig. 11.)

The reference to the figure was accidentally omitted on p. 341.

Group **PLATYPROSOPINA.**

(To precede *Xanthopygina*, p. 342.)

PLATYPROSOPUS.

Platyprosopus, Mannerheim, Brach. p. 36 (1830); Erichson, Gen. et Spec. Staph. p. 292.

This genus is widely distributed in the tropical regions of the Old World, but in the New World has hitherto been only detected in the Amazons Valley, where the species are rather numerous.

1. **Platyprosopus mexicanus.**

Angustus, parallelus, fusco-rufus, capite prothoraceque piceis, antennis pedibusque testaceis; prothorace nitido, seriebus punctorum discoidalibus brevibus parum discretis, ad latera parce punctatis; elytris abdomineque opacis, dense subtiliter punctatis.
Long. 9 millim.

Hab. MEXICO, San Juan Bautista in Tabasco (*Höge*), Tlacotalpam (*Flohr*).

Antennæ moderately long and stout, not thicker externally. Head rather broader than the thorax; neck very broad, but the constriction in front of it quite distinct; coarsely, irregularly punctate. Thorax with a short, irregular series of about five punctures on each side of the middle, and with fifteen or sixteen punctures irregularly placed between these and the sides. Elytra slender, slightly longer than the thorax. Four examples.

Extremely close to the Amazonian *P. rectus*, but with the head rather broader, the articulations of the antennæ a little longer, and the punctures on the thorax more numerous.

TYMPANOPHORUS (p. 342).

Tympanophorus concolor (p. 343).

Before the locality given, insert:—Mexico, near the city (*Höge*), Atlisco, Orizaba *Flohr*).

Mr. Flohr captured one of his examples in an ant's nest, another was taken flying.

PHANOLINUS (p. 363).

Phanolinus obsoletus (p. 364).

To the locality Mexico, add:—Jalapa (*Höge*).

GLENUS (p. 369).

3. **Glenus extimus.**

Rufo-fulvus, abdomine nigro variegato, antennis tibiisque fuscescentibus; prothorace elongato, vix metallescente, parce, minus profunde punctato.
Long. 16 millim.

Hab. Mexico, Durango city (*Höge*).

Head very short, densely punctate. Thorax with moderately numerous and large, but subobsolete punctures, each bearing a seta; dull, with a broad smooth space along the middle and a short obsolete channel. Elytra about as long as the thorax, dull, obsoletely punctate. Hind body sparingly punctate; each of the segments, except the terminal one, with a large black mark on the middle. Male with the posterior coxa produced so as to form a long stout spine; terminal ventral plate with a remarkably broad, gently curved emargination of the hind margin. One example.

This has different male characters from *G. flohri*, and, moreover, is easily distinguished from that species by the finer and more distant punctuation of the thorax.

4. **Glenus setosus.**

Rufo-fulvus, abdomine vage nigro variegato, antennarum basi tibiisque fuscescentibus; prothorace nitido, metallico-nitescente, parce minus fortiter punctato, medio latius lævigato.
Long. 15–18 millim.

Hab. Mexico, Altisco in Puebla (*Höge*).

Although similar to *G. extimus* this species is easily distinguished by the more shining thorax, and the less densely punctured head. The dark marks on the hind body do not take the form of distinct spots, but of a vague blackening of the surface across the middle of each segment, including the apical one. In the male the hind coxa projects backwards, its external portion forming a broad curved process; the last ventral plate has a rather narrow and shallow, subangular, excision on the hind margin. Five examples.

STAPHYLINUS (p. 371).

Staphylinus biseriatus (p. 374).

Before the locality given, insert:—MEXICO, Cuernavaca, Tonila in Colima (*Höge*).

7 (A). **Staphylinus sedatus.**

Niger, opacus, capite prothoraceque fusco-pubescentibus, abdomine utrinque griseo-flavescente maculato; corpore subtus griseo-flavescente.

Long. 28 millim.

Hab. MEXICO, Zapotlan in Colima (*Höge*).

Closely allied to *S. biseriatus*, but readily distinguished by the fuscous pubescence of the head and thorax. The punctuation is fine and very dense, coarser on the head, but quite shallow and obsolete there. The antennæ are short, fusco-ferruginous, the median joints black. The clypeal membrane is large and pallid. The cinereous marks on the sides of the dorsal segments of the hind body extend to the hind margin; the anal styles are clothed with flavescent hairs. The front feet are sordid red, the other tarsi piceous. The male has a small excision on the hind margin of the last ventral plate. One example.

14 (A). **Staphylinus lupinus.**

Elongatus, opacus, densissime subtilissime punctatus, fusco-niger; elytris, antennarum basi pedibusque rufis; capite prothoraceque fulvo-tomentosis; abdomine parce aureo-pubescente, medio minus argute nigro-vittato.

Long. 27 millim.

Hab. MEXICO, Refugio in Durango (*Höge*).

This insect is closely allied to the North-American *S. vulpinus*; but the hind body above is covered scantily with golden hairs, except that on the middle of each segment there are two almost united black spots forming thus a median black band which does not extend to the terminal segment. The head is narrowed in front, and the base and hind angles of the thorax are quite rounded; the sculpture of these parts is extremely fine. The elytra are clothed with a fulvous pubescence, giving them a red appearance. The undersurface bears a rather scanty pubescence, which is between fulvous and flavescent in tint. The middle and hind femora are fuscescent above. Two female examples.

Staphylinus discretus (p. 379).

To the Mexican locality given, add:—Jalapa (*Höge*).

The example now received is, like the original one, in a very bad state of preservation.

38 (A). Staphylinus nudicollis.

Angustus, niger, capite prothoraceque supra æneis, subnitidis, vage fortiter, minus profunde punctatis, elytris abdomineque fuscis, opacis, hoc vix variegato, ad apicem fusco-ferrugineo, tarsis piceis.
Long. 16 millim.

Hab. Mexico, Pastepec (*Flohr*).

Somewhat similar to *S. antiquus*, but with a peculiar sculpture of the head and thorax. The former is subquadrate, sparingly punctate, but between the larger punctures there are numerous minute ones. The thorax is about as long as broad, sculptured like the head, except that the larger punctures are closer, and the minute ones less numerous; there is a definite, rather narrow, smooth space extending all along the middle. The scutellum is covered with black tomentum. The elytra are about as long as the thorax, very dull, with obsolete sculpture. The hind body is only very indistinctly variegate, but there are two somewhat curved and not contiguous darker marks on the middle of each segment. The male has a rather broad shallow excision on the hind margin of the last ventral plate. One example.

MISANTLIUS (p. 393).

3 (A). Misantlius rufipennis.

Subdepressus, subopacus, niger, elytris, tibiis tarsisque ferrugineis; dense punctatus.
Long. 16 millim.

Hab. Mexico, Yolotepec, Juquila (*Flohr*).

Head broad, transversely suborbicular, very densely punctured. Thorax elongate, much narrower than the elytra, much narrowed behind, coarsely and very densely punctate. Elytra rather longer than the thorax, very finely, densely punctate, tawny red. Hind body slightly shining, not so densely punctate as the anterior parts. Legs slender; femora black, the tibiæ and tarsi ferruginous, the former darker towards the base. The front tarsi are a little dilated in each sex. The male has a small notch on the hind margin of the last ventral segment; and the preceding segment is marked with a large shallow depression, the sides of which are fringed with long erect setæ, and the base with similar but more densely-placed setæ, which (in the example before me) are divided into three pencils.

Four specimens of this distinct species have recently been sent me by Mr. Flohr.

PHILONTHUS (p. 395).

1 (A). **Philonthus rufiventris.**

Rufo-testaceus, capite, prothorace pectore cum coxis antennisque nigris, his articulis duobus ultimis ferrugineis; prothorace serie dorsali bipunctato.
Long. 10 millim.

Hab. MEXICO, Amecameca in Morelos (*Höge*).

This is a very peculiar insect not allied to any other *Philonthus* except *P. abnormalis*, from which it differs greatly in colour, and in the absence of the posterior puncture on the thorax. Superficially it resembles *Belonuchus formosus*, differing, however, by the hind body being entirely black. The thorax has two punctures near the front margin, the anterior one being placed close to the margin, and the second about one fifth of the length of the thorax behind it: there is no other species known agreeing with *P. rufiventris* in this respect, and in Erichson's system it would form a distinct group; the thoracic seta is placed at a distance from the margin as in *Belonuchus*. The antennæ are moderately long, but little thicker externally, the penultimate joints scarcely transverse. Head with a few large punctures near the sides. Thorax elongate, shining black; with two punctures near the front on each side of the middle, and outside these two others similarly placed, and with a puncture or two between these and the marginal impressions. Scutellum black, finely punctate. Elytra tawny-yellow, slightly longer than the thorax, rather closely and coarsely punctate. Hind body moderately closely and finely punctate; terminal styles fuscous except at the base.

A single female; it has the front and hind femora without spines.

3 (A). **Philonthus prescottianus.**

Niger, capite prothoraceque violaceis, elytris violaceo-æneis; parce punctatus.
Long. 12 millim.

Hab. MEXICO, Amecameca in Morelos, Salazar (*Höge*).

Similar to *P. palmatus*, but readily distinguishable by the extremely distant punctuation of the hind body. Rather broad; antennæ not thicker externally, the penultimate joint about as long as broad. Thorax rather short and broad, not so long as wide, feebly sinuate at the sides, the hind angles distinct but very obtuse. Scutellum black, very sparingly punctured. Elytra shining, sparingly punctured, of a beautiful golden or brassy hue tinctured with violet. Hind body intensely black, shining, very sparingly punctate and pubescent. The tarsi are slender, reddish, with the basal joint darker. The female has the front tarsi slightly dilated; the male is unknown.

I have named this species in honour of the distinguished author of the History of the Conquest of Mexico.

12 (A). **Philonthus semiruber.**

Philonthus semiruber, Horn, Trans. Am. Ent. Soc. xi. p. 187 [1].

Hab. NORTH AMERICA, California [1], Arizona [1].—MEXICO, Villa Lerdo in Durango (*Höge*).

Philonthus incertus (p. 416).

Philonthus gracilicornis, Horn, Trans. Am. Ent. Soc. xi. p. 190[1].

Before the locality given, insert:—NORTH AMERICA, Arizona [1] (*Horn*).

56 (A). Philonthus iteratus.

Rufo-testaceus, capite, prothorace abdomineque ad apicem nigris; antennis basi nigro, extrorsum ferrugineis; prothorace serie dorsali interdum 6-punctato.

Mas capite majore, mandibulis extus ad basin oblique dilatatis, femoribus anterioribus subtus in medio spinosis.

Long. 10–12 millim.

Hab. MEXICO, Villa Lerdo in Durango (*Höge*).

Resembles almost exactly the larger examples of *Belonuchus formosus*, but rather larger, and with different sexual characters; also similar to *P. trochanterinus* and *P. zunilensis*, but with the trochanters simple and the mandibles of the male dilated. *P. iteratus* is most nearly allied to *P. xanthomelas*, from which it differs in the colour of the breast, coxæ, antennæ, and palpi; and, moreover, has the basal joint of the hind tarsus considerably longer. Herr Höge met with a good series of this species, and no variation beyond that of the sexual characters is to be seen in it. I may mention that in addition to the characters I have previously pointed out to distinguish the males of this intricate group of species there exists another, viz. that in *Belonuchus formosus* the male mandibles have a simple tooth internally, while in *P. xanthomelas* and *P. iteratus* this is replaced by an elongate slightly emarginate incrassation.

84 (A). Philonthus heteropus.

Elongatus, subparallelus, niger, capite, prothorace elytrisque vix subænescentibus; prothorace serie dorsali multipunctato, punctis fere grossis; tarsis posterioribus brevibus, articulo basali crasso, brevi, quam articulus terminalis breviore.

Long. $9\frac{1}{2}$ millim.

Hab. MEXICO, near the city (*Höge*).

Antennæ black, moderately stout, the penultimate joint about as long as broad. Head with two large punctures on each side near the eye, and with numerous coarse punctures at the hind angles. Thorax subquadrate, very shining; dorsal series of punctures rather irregular, consisting of six or seven very large impressions; outside the series there are five or six other punctures on each side, and a few near the front angles. Elytra longer than the thorax, closely and rather finely punctate. Hind body moderately closely and finely punctate.

A single mutilated female is all we have received of this interesting species, remarkably distinct on account of the short basal joint of the hind foot; notwithstanding this latter character, I think it better placed in *Philonthus* than in *Actobius*.

84 (B). Philonthus actocharis.

Elongatus, subdepressus, niger, femoribus sordide testaceis; prothorace nigerrimo, sat crebre punctato, medio late lævigato; elytris grisescentibus, fortiter sat crebre punctatis.

Long. 9 millim.

Hab. MEXICO, Tehuantepec (*Höge*).

Antennæ long and slender, not thicker externally, black, the basal joint more pallid beneath. Head rather closely punctate, with a large space on the middle and a smaller one behind the labrum smooth. Thorax elongate parallel, the lateral punctuation irregular, rather numerous. Elytra with rather close and definite punctuation. Hind body rather closely punctate, subgrisescent. The front tarsi are very slightly dilated in the female, more distinctly dilated in the male; in the latter sex there is a small angular notch on the last ventral plate.

This species approaches closely to the genus *Actobius*, but the basal joint of the hind foot is just perceptibly longer than the terminal one.

BELONUCHUS (p. 428).

Belonuchus flavipennis (p. 430).

To the Mexican localities given, add:—Tula in Hidalgo (*Höge*).

We have now received a fair series of this species exhibiting little or no variation. The male has only a very slight emargination of the hind margin of the last ventral plate.

Belonuchus erythropterus (p. 432).

To the Mexican localities given, add:—Tehuacan and Cholula in Puebla, Tula in Hidalgo, Mexico city (*Höge*).

This insect varies greatly in size; all the examples (about twelve) from Tehuacan belong to a large form of which no specimens occurred among the large series found at Tula. There may be two species still mixed under this name, but I cannot distinguish them by any constant character other than that of size.

Belonuchus simplex (p. 432).

To the Mexican localities given, add:—Acapulco in Guerrero (*Höge*).

Herr Höge has now found a fair series of this species, and although very closely allied to *B. erythropterus* it appears to be really distinct. In this group of species of *Belonuchus* there exists a peculiar transverse band at the base of each of the basal dorsal plates of the hind body, developed at the expense of the true basal margin, which is very much reduced in extent; the band bears a very fine sculpture, and is elevated so as to be separated by a sharp line of demarcation from the rest of the segment. This band of sculpture does not exist as above described on the antepenultimate segment in *B. simplex*; it is, however, present in *B. erythropterus*.

13. **Belonuchus viridipennis.**

Belonuchus viridipennis, Baudi, Studi Ent. p. 125[1].
Belonuchus dejectus, huj. op. p. 433.

To the localities given, add :—COLOMBIA [1] (*Fauvel*).

M. Fauvel informs me that he has seen the type of *Belonuchus viridipennis*, Baudi, and that it is this species, and also that he possesses an example from Colombia. The name *dejectus*, therefore, becomes a synonym.

ACTOBIUS (p. 457).

3 (A). **Actobius mœstus.**

Subparallelus, nitidus, niger, pedibus fuscis; dense punctatus, abdomine omnino densissime subtilissimeque punctato.
Long. 5 millim.

Hab. MEXICO, near the city (*Höge*).

Antennæ rather short, a little thicker externally, the penultimate joints each slightly transverse; black, the base fuscous. Head subquadrate, shining black; rather coarsely punctured, with a smooth space along the middle. Thorax rather closely punctate, with a smooth space along the middle. Elytra longer than the thorax, closely and finely punctate; black, with a very minute griseous pubescence. Hind body not at all narrowed towards the base, extremely densely and scarcely visibly punctured.

This may be distinguished from all other of our species by the minute, dense punctuation of the hind body. The two examples we have received are, I think, of the female sex, though they have the front feet distinctly dilated.

Actobius politus (p. 461).

To the locality given, add :—GUATEMALA, Coatepeque (*Champion*).

9 (A). **Actobius adustus.**

Angustus, elongatus, parce punctatus et pubescens, nitidulus; capite, pectore, elytris ex parte majore abdominisque versus apicem nigris, prothorace abdomineque basi rufis, antennarum basi, elytrorum apice pedibusque pallide flavis.
Long. 5 millim.

Hab. MEXICO, La Noria in Sinaloa, Tehuantepec (*Höge*).

A distinct species, of elongate slender form, in colour similar to *A. politus*. Antennæ elongate; blackish, with the basal joints pale yellow. Palpi and mandibles yellow. Head elongate and narrow, oblong-oval, black, very sparingly punctured. Thorax red, elongate, and slender, much narrower than the elytra, at the sides sparingly punctured. Elytra longer than the thorax, very sparingly punctured; blackish, the hind margin broadly pale yellow. Hind body with coarse punctuation at the extreme base of each one of the basal four segments, these segments red, more or less infuscate; the penultimate segment black, with yellow margin; the terminal segment black, but yellow at the extreme base. The male has a feeble dilatation of the front feet, and a slight emargination on the hind margin of the last ventral ring.

Eight specimens. The example from La Noria is in a very bad state of preservation, but apparently is a pallid variety of this species.

DIOCHUS (p. 466).

1 (A). **Diochus longicornis.**

Diochus longicornis, Sharp, Trans. Ent. Soc. Lond. 1876, p. 184[1].

Hab. MEXICO, Teapa in Tabasco (*Höge*).—SOUTH AMERICA, Amazons valley[1].

The unique example we have received from Herr Höge may, perhaps, prove not to belong to this species, with which, however, it agrees in the elongate antennæ, and differs only in slight details.

XANTHOLINUS (p. 475).

Xantholinus resectus (p. 480).

To the locality Mexico, add:—near the city (*Höge*).

Xantholinus difficilis (p. 482).

Before the locality given, insert:—MEXICO, Salazar (*Höge*).

I am not quite sure that the solitary example now obtained is really conspecific with the unique Guatemalan type, as it is both smaller and more slender.

SOMOLEPTUS (p. 494).

Somoleptus bicolor (p. 495).

Before the locality given, insert:—MEXICO, near the city, Zacualtipan (*Höge*).

SAUROHYPNUS (p. 501).

2. **Saurohypnus nigerrimus.**

Elongatus, angustulus, nigerrimus, nitidus; antennis extrorsum tarsisque rufo-obscuris; capite elytrisque fortiter punctatis; prothorace tantum versus angulos anteriores et ad latera punctato.
Long. 16 millim.

Hab. MEXICO, Jalapa (*Höge*).

Head slightly broader than the thorax, shining black, coarsely punctured, the punctures on the middle distant; antennal grooves elongate. Thorax elongate, narrowed towards the base, shining black, with coarse punctuation along the side margins and front, and with six or seven other punctures placed irregularly near the side in front. Scutellum bearing six large punctures. Elytra about as long as thorax, regularly, coarsely, and distantly punctured. Hind body finely and sparingly punctured, shining black. Four examples.

This insect has the antennæ rather more widely separated than they are in the

typical species; and the two median lobes of the labrum are slightly emarginate, so that the front of the labrum exhibits six slight projections.

CRYPTOBIUM (p. 506).

Cryptobium collare (p. 507).

Var. Prothorace nigro, parcius punctato.

Hab. Mexico, La Noria in Sinaloa (*Höge*).

The small series procured of this variety agree rather closely *inter se*, but can scarcely be regarded as representing a distinct species without more evidence.

Cryptobium luridum (p. 512).

To the Mexican localities given, add:—La Noria in Sinaloa, Tehuantepec (*Höge*).

12 (A). Cryptobium sedatum.

Piceo-ferrugineum, antennis rufis, pedibus dilutis; capite subopaco, dense profunde punctato; prothorace crebrius punctato, medio longitudinaliter lævigato, lateribus subrotundatis; elytris densius, profunde fortiterque punctatis, subrugosis.

Long. 12 millim.

Hab. Mexico, La Noria in Sinaloa (*Höge*).

Though very similar to *C. luridum* and its immediate allies this species will be easily distinguished by a slight difference in the shape of the thorax, the sides being a little rounded and narrowed towards the front; the head is shining in front, and the punctuation of the thorax is closer than in the species mentioned. Only two examples have been obtained; they are of the female sex, and are without positive sexual marks.

12 (B). Cryptobium placidum.

Ferrugineum, pedibus testaceis; capite subnitido, dense, profunde punctato; prothorace crebre punctato, medio late longitudinaliter lævigato; elytris crebre fortiter punctatis.

Long. 13 millim.

Hab. Mexico, Zacualtipan in Hidalgo, Aguas Calientes city (*Höge*).

This insect resembles *C. luridum* in colour and appearance, but the surface of the head is shining: this is very evident in front, where the punctuation is absent; but on the vertex, where the punctuation is very dense, it is, of course, less conspicuous. The punctuation of the elytra is also rather coarser than in the species similar to this in colour. *C. placidum* is more nearly related to *C. sedatum*, but the head is rather more coarsely and less densely punctured; the thorax is very much more sparingly punctured, and the rounding of the sides at the front angles scarcely evident; and the elytra are shorter and more coarsely punctate. The male has an elongate setigerous line on the third ventral plate; the following plate is produced so as to form a long broad lobe, and also bears a small, elliptical, setigerous fovea.

Cryptobium æquale (p. 513).

Before the localities given, insert:—MEXICO, Nuevo Laredo in Tamaulipas, La Noria in Sinaloa (*Höge*).

The specimens from La Noria seem quite similar to the typical examples from Guatemala, but the two individuals from Nuevo Laredo may possibly be distinct; the latter are, however, so very immature that not much value can be attached to the differences that are perceptible.

Cryptobium venustum (p. 516).

To the Mexican localities given, add:—Villa Lerdo in Durango (*Höge*).

Cryptobium politulum (p. 516).

To the Mexican locality given, add:—Cuernavaca in Morelos (*Höge*).

Cryptobium complectens (p. 517).

To the Mexican localities given, add:—Tehuantepec (*Höge*).

The male has a short setigerous line on the third ventral plate, and a circular fovea on the following segment; the hind margin of this segment is produced so as to form a long rather broad lobe narrowed towards the extremity and there subacuminate.

Cryptobium crassulum (p. 520).

To the Mexican locality given, add:—La Noria in Sinaloa, Tehuantepec (*Höge*).

A good series has now been procured of this insect; the examples are rather smaller and more slender than the two females originally described. The male has two minute pencils of hair placed in a small space on the third ventral plate, and a single pencil on the following segment; the hind margin of this latter segment is produced so as to form a very broad short lobe.

Cryptobium rostratum (p. 532).

Before the localities given, insert:—MEXICO, Acapulco in Guerrero (*Höge*).

The unique example from this subregion differs from the more southern examples in being narrower, and possessing a more densely punctured thorax.

Cryptobium aberrans (p. 533).

Before the locality given, insert:—MEXICO, Acapulco in Guerrero (*Höge*).

ABABACTUS (p. 533).

Ababactus politus (p. 536).

Before the localities given, insert :—MEXICO, Tapachula in Chiapas (*Höge*).

LATHROBIUM (p. 536).

6. Lathrobium pusillum.

Elongatum, angustulum, subdepressum, testaceum ; prothorace medio biseriatim, ad latera crebre, punctato ; elytris quam prothorax longioribus, seriatim obsolete punctatis.

Long. 5 millim.

Hab. MEXICO, San Juan Bautista in Tabasco (*Höge*).

Antennæ slender, elongate, not thicker externally. Head small, quite shining, smooth in the middle, the margins sparingly punctate. Thorax subquadrate, with two widely separated series of punctures along the middle; the lateral punctures are numerous, and not distinctly separated from the serial punctures. Elytra with numerous series of quite obsolete punctures extending their whole length. Hind body quite dull, very densely and finely punctured.

This species is similar to the pallid examples of *L. dimidiatum*, but may be easily discriminated by the more numerous and more obsolete serial punctures on the elytra. The examples received are not in a good state of preservation, and the specimens examined do not exhibit any sexual character.

7. Lathrobium flavidulum.

Elongatum, angustulum, subdepressum, testaceum ; prothorace medio biseriatim, ad latera crebre, punctato ; elytris quam prothorax paullo longioribus, crebre, minus fortiter, irregulariter punctatis.

Long. $6\frac{1}{2}$ millim.

Hab. MEXICO, San Juan Bautista in Tabasco (*Höge*).

Var. Rufo-testaceum, elytris ad basin seriatim ad apicem irregulariter punctatis.

Hab. MEXICO, Nuevo Laredo in Tamaulipas (*Höge*).

Antennæ long and slender. Head sparingly punctate. Thorax longer than broad. Elytra with irregular punctuation.

This insect is more elongate (the antennæ, head, and thorax being longer in proportion to the width) than *L. pusillum*, and the elytral punctuation is coarser and less regular. The only example received is apparently a female.

The variety may perhaps prove to be a different species; the unique exponent of it is also a female.

8. Lathrobium durangoense.

Robustum, piceum, capite prothoraceque nigris, elytris fusco-rufis, antennis pedibusque rufo-testaceis ; protho-

race medio biseriatim, ad latera crebre, punctato, punctis seriatis irregularibus; elytris crebre, fortiter, seriatim punctatis.
Long. 10 millim.

Hab. MEXICO, Durango city, Villa Lerdo (*Höge*).

In this insect the thoracic punctuation is coarser than is usually the case in the species with biseriate sculpture, and the series are irregular; but I think there is no doubt it really belongs to the group in question, though these characters, in addition to the large stature, give it a great resemblance to the species without serial thoracic punctuation. Head with coarse punctuation nowhere numerous, and on the middle extremely distant; hind angles much rounded. Thorax longer than broad, narrowed towards the base. Elytra each with five series of rather coarse punctures, and with irregular punctuation at the sides and apex.

The two examples received are both females, and are in a bad state of preservation.

SCOPÆUS (p. 540).

Casey (in Bull. Calif. Ac. Sci. ii. p. 220) has proposed two new genera, *Scopæodera* and *Leptorus*, dismembered from *Scopæus*, and to include certain of our species indicated by him (*l. c.*). I content myself at present with pointing this out, for it would not be prudent to dismount the typical examples, frequently unique, of these fragile and minute insects to examine their structural characters.

1 (A). **Scopæus femoralis.**

Testaceus, parum convexus, subopacus, subtilissime punctatus; prothorace basi in medio subelevato, utrinque vix impresso.
Long. 4 millim.
Mas femoribus posterioribus incrassatis, margine posteriore concavo.

Hab. MEXICO, near the city (*Höge*).

Antennæ with the second and third joints subequal, the tenth joint about as long as broad. Head elongate, extremely finely and densely punctured, quite dull. Thorax oblong, rounded at the front and hind angles, yellow, rather shining, finely and not very densely punctate. Elytra longer than the thorax, finely not very densely punctate, a little shining. Male with a broad emargination of the last ventral plate; the basal segment depressed, deplanate and shining in the middle; the following two segments each with a fine seta on either side of the middle near the hind margin, the first of these segments with a small tubercle at the extreme base; hind femora rather incrassate, curvate, at their point of junction with the trochanters furnished on their upper face with a short pencil of black setæ; the upper edge of the hind margin of the femur minutely serrate at the extremity; and the tibiæ extremely minutely serrate and pubescent along the inner margin.

This is not at all allied to any other of our species, and the remarkable characters of the male are quite unique. We have received only one example.

LITHOCHARIS (p. 549).

1 (A). **Lithocharis curviceps.**

Nigra, antennis pedibus elytrisque fusco-testaceis, his disco fuscescente; capite prothoraceque subtiliter punctatis, medio nitidulis.
Long. 5 millim.

Hab. Mexico, near the city, Amecameca, Toluca, Huitzo (*Höge*).

Antennæ rather large. Head distinctly emarginate behind, black; densely and very minutely punctate except on the disc, where the punctures are more distant, so that this part is shining. Thorax about as long as broad, black, very minutely punctate; the punctures are more distant on the disc, and there is a very slender shining space along the middle. Elytra much longer than the thorax, densely and finely punctate, slightly shining. Hind body extremely finely punctate. Male unknown.

Distinguished from *L. mendax* by the head being a little emarginate behind.

EUSTILICUS (p. 579).

Eustilicus mexicanus (p. 580).

To the Mexican locality given, add:—Cuernavaca in Morelos (*Flohr*).

TROCHODERUS (p. 580).

3. **Trochoderus ovaticeps.**

Ferrugineus, capite fusco-ferrugineo, pedibus testaceis, dense subtilissime punctatus, opacus; prothorace medio linea lævigata nitida.
Long. 7 millim.

Hab. Mexico, La Noria in Sinaloa (*Höge*).

Head oval, very densely punctured, dull, darker in colour than the other parts. Thorax about as long as broad, very greatly narrowed in front, densely and finely granulose, dull, with a slender smooth space along the middle. Elytra longer than the thorax, densely punctate.

We have received only one female of this insect. In addition to being of a brighter colour than the other species of the genus, it has a considerably narrower head.

SUNIOCHARIS (p. 586).

Suniocharis fragilis (p. 587).

To the Mexican locality given, add:—Acapulco in Guerrero (*Höge*).

An example recently captured by Herr Höge at Acapulco has the head quite pale, but does not apparently differ in any character of specific importance from the type.

DIBELONETES (p. 601).

Dibelonetes pallipes (p. 603).

Before the localities given, insert:—MEXICO, Jalapa (*Höge*).

PINOPHILUS (p. 620).

2 (A). **Pinophilus fuscipes.**

Niger, opacus; antennis palpisque fusco-testaceis, pedibus testaceis, femoribus extrorsum tibiisque basin versus fuscescentibus; prothorace opaco, obsolete punctato; elytris dense fortiterque punctatis.
Long. 11 millim.

Hab. MEXICO, San Juan Bautista in Tabasco (*Höge*).

Head dull, with very coarse distant punctures on the anterior part, behind them an impunctate space, the vertex obsoletely rugose-punctate. Thorax about as long as broad, a little narrowed behind; the surface quite dull, with numerous distant obsolete punctures. Elytra longer than the thorax, coarsely rather closely punctate. Hind body coarsely punctate.

Resembles *P. albipes*, but is only half the size, and has the sculpture of the thorax different. It has a narrower thorax than *P. opacicollis*, and more coarsely and less densely punctured elytra. Only one specimen has been received.

Pinophilus parviceps (p. 622).

To the Mexican locality given, add:—Paso del Norte (*Höge*).

11 (A). **Pinophilus picifrons.**

Elongatus, parallelus, piceus; capite prothoraceque nigris, illo clypeo piceo, antennis, palpis pedibusque flavis; prothorace nitido, fortiter minus dense punctato.
Long. 14 millim.

Hab. MEXICO, Acapulco in Guerrero (*Höge*).

Antennæ very slender, extending as far back as the hind margin of the thorax. Head with two large punctures on the front margin; with fine punctures on each side near the front, and some other large punctures about the vertex; the surface quite shining, bearing numerous minute punctures in addition to the coarser sculpture. Thorax about as long as broad, narrowed behind; with numerous coarse punctures leaving a smooth line along the middle, and a smooth space near each front angle. Elytra piceous-red, coarsely and rather closely punctate. Hind body coarsely and closely punctate, red at the extremity.

Distinguished from all the others of this group by the quite shining head and thorax. One example.

ŒDODACTYLUS (p. 630).

2. Œdodactylus aper.

Fusco-brunneus, opacus, dense punctatus, subrugosus, antennis pedibusque rufis.
Long. 5 millim.

Hab. Mexico, Tlacotalpam in Vera Cruz (*Höge*).

Antennæ pale red, slender, delicately articulated, the terminal joint truncate. Head short, almost as broad as the thorax, closely and coarsely punctate, somewhat shining in front. Thorax rather longer than broad, a little narrowed behind, with the base quite rounded; densely and coarsely punctate, even, not shining. Elytra slightly longer than the thorax, dull, densely rugose-punctate. Hind body pubescent, indefinitely rugose-punctate.

Very closely allied to the Amazonian *Œ. anceps*, but rather smaller and more slender, with comparatively more elongate thorax.

PALAMINUS (p. 631).

Palaminus concolor (p. 635).

Before the localities given, insert:—Mexico, Tapachula in Chiapas (*Höge*).

Palaminus vittatus (p. 639).

Before the locality given, insert:—Mexico, Teapa (*Höge*).

STENUS (p. 640).

4 (a). Stenus abscondens.

Niger, pedibus piceis, palporum articulo basali flavescente; rugoso-punctatus, parum nitidus; abdominis parce pubescente, segmentis ad basin tricuspidatis.
Long. $4\frac{1}{2}$ millim.

Hab. Mexico, Chihuahua city (*Höge*).

Head a little broader than the thorax and narrower than the elytra; vertex not excavate, broadly but slightly bisulcate; interstice broad, one third of the width of the interocular space, the punctuation rather coarse, dense. Thorax rather longer than broad, rounded at the sides; surface rather uneven, without any trace of channel, rugosely punctate. Elytra rather longer than the thorax, densely and rather coarsely rugose-punctate, slightly shining. Hind body very much narrowed to the extremity, the bases of the segments strongly tricuspidate, the punctuation moderately close, the pubescence depressed but more distinct than on the anterior parts. The male has a rather small notch on the hind margin of the last ventral segment; and the preceding segment

has behind a broad depressed space, the anterior margin of which is curvate, the hind margin being very feebly emarginate. Two examples.

This is not closely allied to any other of our species. In Casey's arrangement of the North-American *Steni* it should apparently come near *S. animatus*.

4 (B). **Stenus idoneus.**

Niger, pube erecta sat dense vestitus, dense fortiter punctatus, sat nitidus, pedibus piceis, antennarum articulo basali flavescente; fronte obsolete bisulcata, haud excavata; prothorace canaliculato; abdominis segmentis ad baseos quadricuspidatis.

Long. 4 millim.

Hab. MEXICO, near the city, Toluca (*Höge*).

Head rather small, scarcely broader than the thorax, broadly and very indistinctly depressed on either side near the eye. Thorax longer than broad, densely rugose-punctate, distinctly canaliculate along the middle. Elytra considerably broader, and a little longer, than the thorax; densely rugose-punctate, but shining, and the sculpture not at all tortuous. Hind body rather sparingly punctured. Male unknown. Two specimens.

This species is not closely allied to any other known in our region, nor does it appear to be closely allied to any of the North-American *Steni* described and tabulated by Casey. The erect pubescence is one of its most striking peculiarities, and in the typical example from Toluca the pubescence is flavescent; the second example from the City of Mexico is much abraded, and the pubescence is paler; this latter example, moreover, has the legs black, so that it possibly may be a closely allied distinct species.

Stenus eremitus (p. 655).

To the Mexican locality given, add:—Tlacotalpam (*Höge*).

Stenus laceratus (p. 658).

To the Mexican localities given, add:—Mexico city, Huitzo in Oaxaca, Cordova, San Juan Bautista in Tabasco, Tehuantepec (*Höge*).

The small series shows a good deal of variation in the punctuation of the thorax and elytra, the punctuation being much scantier in the slender examples from Tehuantepec.

Stenus godmani (p. 662).

Mr. Flohr informs me that this species (and probably others of this peculiar group) is arboreal in its habits; he has recently obtained it by beating small oaks at Jalapa.

OSORIUS (p. 677).

Mr. Flohr confirms Mr. Champion's statement that the smaller species of this genus live in sand on the banks of streams, while the larger ones inhabit burrows in rotten wood; and he also remarks that they possess the power of running backwards as well as forwards in their channels.

Osorius salvini (p. 682).

Before the localities given, insert:—MEXICO, near the city, Cordova, Vera Cruz (*Höge*).

BLEDIUS (p. 685).

1 (A). Bledius armatus.

Oxytelus armatus, Say, Journ. Ac. Sci. Phil. iii. p. 155[1]; Complete Writings, ii. p. 100[2].
Bledius armatus, Er. Gen. et Spec. Staph. p. 779[3]; Lec. Trans. Am. Ent. Soc. vi. p. 221[4].

Hab. NORTH AMERICA[1 2 3], Nevada to Arizona[4].—MEXICO, near the city (*Höge*).

Bledius inornatus (p. 685).

Before the locality given, insert:—MEXICO, Medellin (*Flohr*).

Found in the sand on the banks of the river Jamapa.

2 (A). Bledius derasus.

Niger, prothorace rufo, antennis pedibusque flavis, elytris pallidis; prothorace parce obsolete punctato, medio canaliculato, angulis posterioribus obtusis; elytris quam prothorax longioribus, crebre sat fortiter punctatis. Long. 5 millim.

Hab. MEXICO, Villa Lerdo in Durango (*Höge*).

Head dull; antennal carinæ sharply elevated, elongate, red in front; mandibles rather short. Thorax not so long as broad, straight at the sides nearly to the hind angles, then much narrowed, the angles distinct though very obtuse; the surface quite dull, the distant punctuation obsolete. Elytra very pale yellow; coarsely punctate near the suture, more obsoletely so at the sides. Three examples.

Easily distinguished from *B. inornatus* by the more obsolete sculpture.

PLATYSTETHUS (p. 686).

Platystethus spiculus (p. 678).

Before the localities given, insert:—MEXICO, near the city (*Höge*).

APOCELLUS (p. 694).

1 (A). **Apocellus mœstus.**

Angustulus, niger, capite prothoraceque piceis, antennarum basi, palpis pedibusque testaceis, femoribus extrorsum fuscis; prothorace subgloboso, marginibus punctulatis; elytris parce punctatis.
Long. 4 millim.

Hab. MEXICO, near the city, Huitzo (*Höge*).

Antennæ stout, not very long, joints 5–10 transverse. Head narrow. Thorax convex, between quadrate and globose in form, with a vague feeble punctuation, closer near the sides and basal margin. Elytra slender, longer than the thorax; blackish, more dilute at the shoulders; hind margin and posterior part of the suture bearing a few distant fine punctures. Hind body entirely black, extremely finely punctate.

This insect is similar to the smallest and darkest examples of *A. sphæricollis*, but may be readily distinguished by the shorter thick antennæ and the existence of a feeble punctuation on the thorax and elytra. The male characters are similar to those of *A. sphæricollis*. The twelve examples before me agree satisfactorily, except that the unique individual from Huitzo is rather larger and has a less distinct sculpture.

Apocellus analis (p. 695).

To the Mexican locality given, add:—near the city, Huitzo (*Höge*).

I have as yet only seen two examples from our region that I can refer with certainty to this species; the examples now received from Huitzo appear to be intermediate between *A. analis* and *A. cognatus*, and may possibly be a third species; but I fail, on the very imperfect material before me, to find any satisfactory distinctions for the three forms other than the peculiar sexual structures of the male, and it is possible these may be liable to grades of development, though such a gradation does not appear to occur in the common *A. sphæricollis*. *A. brevipennis*, Casey, is another species very closely allied to *A. analis*, the chief distinctions being in the male characters; it is found in Texas and Arizona, but has not yet occurred within our limits.

TROGOPHLŒUS (p. 697).

1 (A). **Trogophlœus argutus.**

Latus, parum elongatus, subdepressus, niger, geniculis tarsisque flavescentibus; prothorace elytrisque crebre sat fortiter punctatis, sat nitidis, illo medio sat profunde bi-impresso.
Long. 3 millim.

Hab. MEXICO, near the city (*Höge*).

Antennæ rather slender, thicker externally, the penultimate joint rather longer than broad. Head much narrower than the elytra; antennal tubercles strongly elevated.

Thorax a good deal narrower than the elytra, transverse, the sides greatly narrowed behind, definitely and closely punctured, rather shining, the impressions broad and distinct though not deep. Scutellum not visible. Elytra broad, rather short, but a good deal longer than the thorax, closely and coarsely punctate, a little shining, almost without pubescence. Hind body scarcely visibly punctate. Three examples.

This species is readily recognizable by the definite, quite distinct, punctuation of the thorax, a very unusual character in this genus.

INDEX.

[Names in small capitals refer to Families &c.; those in roman type to the chief reference to each species included in the work; those in italics to species incidentally mentioned, synonyms, &c.]

Page

ABABACTUS 533, 794
Ababactus 534
—— depressus 534
—— *depressus* 535
—— filarius 535
—— *filarius* 534
—— gracilis 535
—— *gracilis* 534, 536
—— pallidus 535
—— pennatus 534
—— politus 536, 794
—— *politus* 534
ACALOPHÆNA 554
—— angularis 555
—— *angularis* 554
Acanthoglossa 606
Acilius cinctatus 45
—— *circumscriptus* 44
—— *incisus* 45
—— *maculatus* 44
—— *margineguttatus* 45
—— *nigro-fasciatus* 44
—— *ornaticollis* 44
—— *succinctus* 44
ACTOBIUS 457, 790
Actobius 456, 788, 789
—— adustus 790
—— agnatus 459
—— alternans 461
—— arduus 458
—— *arduus* 459, 460
—— concolor 458
—— delicatulus 461
—— facilis 458
—— fortis 457
—— mixtus 460
—— *mixtus* 461
—— mœstus 790
—— nitidulus 460
—— *nitidulus* 461
—— politus 461, 790
—— simplex 459

Page

ACYLOPHORUS 324, 783
Acylophorus 321, 326, 327
—— *acuminatus* 325
—— chontalenus 326
—— didymus 325
—— luctuosus 325
—— mexicanus 326
—— palpalis 327
—— parviceps 326
—— planatus 327
—— proximus 325
—— simplex 325
—— *simplex* 783
—— versicolor 783
ADEROCHARIS 552
Aderocharis 553, 554
—— furtiva 553
—— latro 552
—— *latro* 553
—— sagax 553
AGABUS 32, 755
Agabus 31
—— ——? 755
—— amaroides 33
—— *amaroides* 756
—— americanus 33
—— *biguttatus* 755
—— *cordatus* 756
—— disintegratus 756
—— flohrianus 756
—— spinipes 32
—— texanus 756
AGAMETRUS 756
Agametrus labiatus 756
—— nitens 756
AGRODES 467
Agrodes 468, 471
—— longicornis 467
ALEOCHARA 146, 775
Aleochara .. 145, 157, 170, 219, 222, 291, 777
—— angusticeps 153

Page

Aleochara atra 146
—— *bicolor* 222
—— *bilineata* 148
—— bimaculata 147
—— *bimaculata* 148, 153
—— centralis 146
—— *duplicata* 147, 148
—— funestior 151
—— *fuscipes* 147, 776
—— hilaris 776
—— lacertina 148
—— *lata* 146
—— mexicana 149
—— miradoris 152
—— *miradoris* 776
—— *mœsta* 153
—— *nitida* 148
—— notula 148
—— *notula* 149
—— *obscuricollis* 295
—— oxypodia 150
—— *oxypodia* 151, 776
—— pauper 147
—— peltata 777
—— quadrata 149
—— repetita 776
—— sallæi 152
—— *sallæi* 153
—— *semivelutina* 154
—— serrata 147
—— *signaticollis* 148
—— simulatrix 151, 776
—— stygialis 775
—— *tæniata* 150, 151
—— torquata 153
—— verberans 149
ALEOCHARINA 146
ALEOCHARINÆ 145
ALLOTRICHUS 486
—— arenarius 486
AMBODINA 157
—— granulata 157

Page

AMICHORUS 390
—— cyaneus 390
—— fauveli 390
—— vividus 391
Anacæna 62, 64, 65, 66
ANCÆUS 716
Ancæus 718, 722
—— clavipes 718
—— *clavipes* 717
—— crassicornis 716
—— megacephalus 717
—— minutus 717
—— politus 718
—— porrectus 717
—— rufescens 718
—— *rufescens* 716
ANEUCAMPTUS 725
—— excisicollis 725
Anodochilus maculatus 753
Anthobium 744
APOCELLUS 694, 801
Apocellus 695
—— analis 695, 801
—— *analis* 696
—— barbatus 696
—— *brevipennis* 801
—— cognatus 695
—— *cognatus* 696, 801
—— gracilis 696
—— mœstus 801
—— muticus 695
—— *nigriventris* 695
—— præstans 696
—— sordidus 697
—— sphæricollis 694
—— *sphæricollis* 695, 696, 801
Arœocerus 620, 628
Arœocnemus flagellicornis 471
—— *fulgens* 468
Areus 640
Autalia 235, 278, 282

BAMONA 287, 781
—— brevicornis 289
—— concolor 288
—— *concolor* 289
—— gracilis 288, 781
—— *gracilis* 287, 289
—— marginata 288
—— minuta 289
—— parallela 290
—— *parallela* 781
—— plana 781
—— plebeia 290
—— robusta 290
BARYCHARA 292

Page

Barychara 287
—— filicornis 292
Baryodma 146, 157, 170
BELONUCHUS 428, 789
Belonuchus 346, 396, 410, 412, 417, 420, 429, 438, 450, 454, 455, 787
—— alternatus 430
—— *biarti* 434
—— bidens 430
—— boops 435
—— cognatus 429
—— connexus 433
—— dejectus 433
—— *dejectus* .. 434, 435, 436, 789, 790
—— dichrous 429
—— *dichrous* 430
—— docilis 435
—— ephippiatus 433
—— erythropterus 432, 789
—— *erythropterus* 433
—— flavipennis 430, 789
—— formosus 431
—— *formosus* 417, 418, 419, 420, 427, 432, 787, 788
—— *hæmorrhoidalis* 429
—— iridescens 432
—— mexicanus 436
—— mimeticus 436
—— *mimeticus* 437, 443
—— panamensis 434
—— *panamensis* 435
—— pictipennis 436
—— *pictipennis* 437
—— pollens 431
—— *pollens* 419, 432
—— *rufipennis* 431
—— similis 436
—— *similis* 437
—— simplex 432, 789
—— *simplex* 430, 433
—— stenoderus 434
—— *validus* 417
—— viridipennis 789
—— *viridipennis* 790
—— *xanthomelas* 417
—— *xanthopterus* 431
—— *xanthopus* 420
BEROSUS 78, 765
Berosus 79, 84, 85, 103
—— *altus* 78
—— debilis 767
—— dispar 767
—— falcatus 81
—— *falcatus* 79, 82

Page

Berosus flavicornis 82
—— *flavicornis* 79
—— flavipes 766
—— gracilipes 83
—— *gracilipes* 79
—— griseus 80, 766
—— *griseus* 79
—— hoplites 765
—— *hoplites* 766
—— infuscatus 81
—— *infuscatus* 79, 82
—— *luridus* 84
—— metalliceps 83
—— *metalliceps* 79
—— mexicanus 82
—— *mexicanus* 79, 83
—— mœrens 84
—— *mœrens* 79
—— *punctatissimus* 80
—— puncticollis 80
—— *puncticollis* 79
—— salvini 79, 765
—— *salvini* 766
—— *styliferus* 82
—— truncatipennis 80, 766
—— *truncatipennis* 79
BIDESSUS 19, 753
Bidessus 754
—— abjectus 24
—— adumbratus 25, 754
—— affinis 23
—— apicatus 20
—— centralis 753
—— curtulus 753
—— *denticulatus* 25
—— discedens 19
—— *discoidalis* 25
—— elongatus 25
—— fryi 22
—— germanus 20
—— hydrovatoides 20, 753
—— latifrons 22
—— lynceus 22, 753
—— *lynceus* 21
—— maculatus 753
—— magensis 24
—— obtusus 24, 753
—— *pictodes* 753
—— pullus 754
—— quadrinotatus 21
—— *quadrinotatus* 22
—— quadrisignatus 21
—— *quadrisignatus* 22, 753
—— spretus 24, 753
—— subornatus 23
—— substriatus 22

Page

Bisnius 457
BLEDIUS..... 685, 800
Bledius 677, 686, 700
—— armatus..... 800
—— bifasciatus..... 686
—— derasus 800
—— *fracticornis* 685
—— gregarius 685
—— *gregarius* 686
—— infantilis 686
—— inornatus 685, 800
—— *jacobinus* 685
—— lecontei 685
—— *muticus* 686
—— *simplex* 686
BOLITOBIUS 316
Bolitobius 317, 318
—— alticola 317
—— festivus 316
—— obliquus..... 317
—— *obliquus* 316
—— *seriatus* 316
Bolitocharaires 284
BOLITOCHARINA 240
Bolitogyrus cribripennis..... 340
BRACHIDA 265
Brachida..... 267
—— carinata..... 266
—— *carinata*..... 267
—— geniculata..... 266
—— modesta..... 265
—— *modesta* 266
—— sparsa 266
BRACHYCHARA 267
—— brevicornis 268
—— crassa..... 267
—— *crassa*..... 268
BRACHYDIRUS 348
Brachydirus 351
—— championi..... 350
—— *championi* 351
—— divisus 349
—— fungicola 351
—— gracilis 349
—— *gracilis* 350
—— solitarius 350
—— terminalis 348
—— *testaceus*..... 351
Bryoporus 317
BYRRHOMORPHUS..... 125
Byrrhomorphus 129
—— vestitus 126

Calobius 90
Calodera 162, 278
—— *syntheta* 196

Page

Calophæna 554
CANTHYDRUS..... 5, 748
—— centralis 6
—— majusculus 6
—— mexicanus..... 6
—— *rotundatus* 5
—— rufipes 7, 749
—— similaris..... 748
—— simplex 5
—— *simplex* 749
—— subsignatus 6
—— varians 5
—— *varians* 6
Cardiola 232, 233
CELINA 31
—— aculeata..... 31
—— *angustata* 32
—— debilis 32
—— gracilicornis 31
—— *latipes* 31
—— punctata 31
CEPHALOPLECTINÆ 295
CEPHALOPLECTUS 295
—— godmani 297
Ceratoderus 88
CERCYON 103, 770
Cercyon 97, 101, 102, 105, 107, 109, 110, 111, 112, 113, 115
—— æqualis 770
—— alticola 771
—— armatus..... 108
—— *armatus*..... 109
—— ebeninus 106
—— insignis 105
—— integer 106
—— *lateralis*..... 111
—— mellipes..... 105
—— mexicanus..... 104
—— *mexicanus* 105
—— *obsoletus*..... 105, 106
—— politus 105
—— prætextatus 107, 770
—— seriatus..... 104
—— striatus 108
—— subsignatus 107
—— *subsignatus* 108, 109
—— variegatus..... 107, 771
CHÆTARTHRIA 86, 768
Chætarthria 87, 102
—— bicolor 87
—— glabra 87, 768
—— læticula 87, 768
—— *nigrella* 88
—— *pallida* 87
—— punctulata..... 87
—— pusilla 88

Page

Chætarthria seminulum 87
CHARHYPHUS 709
Charhyphus 704
—— brevicollis..... 709
CHAROXUS..... 224
Charoxus 225
—— fodiens 225
CHASMOGENUS 73
—— fragilis 73
CHITALIA 235
—— crenata 235
—— *crenata* 236, 237
—— debilis 236
—— dubia..... 237
—— *dubia*..... 236
—— granigera 236
CHROAPTOMUS 437
Chroaptomus 452
—— flagrans..... 437
—— *flagrans*..... 438
—— regalis 438
CILEA..... 308
Cilea 298, 300, 303
—— fenestrata..... 309
CNEMIDOTUS..... 1, 748
Cnemidotus 2
—— 12-*punctatus* 748
—— mexicanus..... 748
—— simplex..... 1
—— *simplex* 748
CŒLAMBUS 26
Cœlambus 15
—— infacetus 26
—— medialis 26
—— wardi..... 26
Cœlostoma 94
—— *insulare*..... 769
—— *minutum* 98
—— *subdepressum* 95
Colymbetes 42
—— *atricolor*..... 42
—— *binotatus* 42
—— *calidus* 42
—— *gutticollis* 42
—— *maculicollis* 42
—— *marmoratus* 45
—— *mexicanus*..... 42
CONOSOMA..... 313
Conosoma 295
—— diffine 316
—— *fusculum* 316
—— gravidum 313
—— *latum*..... 313
—— mediale..... 314
—— ornatum 315
—— parcum 314

Page

Conosoma plebeium 313
—— *pubescens* 314
—— subornatum 315
Conurus 313
COPELATUS 34, 757
Copelatus 35, 756
—— basalis 37
—— *basalis* 34, 39
—— biformis 34
—— cælatipennis 41
—— *consors* 37
—— debilis 37
—— depressus 39
—— distinctus 40
—— fragilis 40, 758
—— *fragilis* 34
—— *glyphicus* 41, 757
—— impressicollis 40, 757
—— *impressicollis* 758
—— incognitus 38
—— *incognitus* 34, 37
—— integer 40, 758
—— laccophilinus 35, 757
—— *laccophilinus* 34
—— læticulus 38
—— *læticulus* 34
—— mancus 757
—— mundus 35
—— neglectus 37
—— posticatus 39, 757
—— prolongatus 39, 757
—— proximus 36
—— *proximus* 34
—— sallæi 35
—— *sallæi* 34
—— *signatus* 39, 757
—— solitarius 36
—— *solitarius* 34
—— terminalis 39
—— validus 38
Coproporus 298
—— *distans* 299
—— *grandis* 308
—— *ignavus* 305
—— *lævis* 304
COPTOTOMUS 41, 758
—— interrogatus 41
—— *interrogatus* 758
—— obscurus 758
—— serripalpus 41
CORDYLASPIS 342
—— pilosa 342
—— *tuberculatus* 342
CREOPHILUS 370
—— maxillosus, var. villosus .. 370
—— *villosus* 370

Page

CRYPTOBIUM 506, 792
Cryptobium 507, 521, 534
—— aberrans 533, 793
—— adversum 510
—— æquale 513, 793
—— *æquale* 514
—— affine 529
—— antoniense 522
—— *antoniense* 521
—— apicipenne 526
—— arduum 523
—— assimile 521
—— bicolor 514
—— brevipenne 529
—— celatum 525
—— centrale 528
—— *centrale* 529, 530
—— cephalotes 509
—— *cephalotes* 510
—— certatum 520
—— chontalense 515
—— cognatum 527
—— collare 507, 792
—— *collare* 508, 509, 512, 517, 519
—— coloratum 516
—— complectens 517, 793
—— concolor 514
—— confine 523
—— *confine* 524
—— conforme 514
—— crassulum 520, 793
—— *curticorne* 531
—— derasum 519
—— *derasum* 520
—— ducale 531
—— errans 522
—— *fasciatum* 515
—— ferrugineum 512
—— filarium 522
—— *filarium* 521
—— flohri 521
—— formosun 514
—— *formosum* 515
—— *fracticorne* 506
—— *gigas* 532
—— grande 532
—— grandiceps 509
—— grandicolle 529
—— guatemalense 518
—— inquisitor 530
—— *inquisitor* 506, 531
—— jejunum 519
—— lithocharinum 531
—— longipenne 510
—— *longipenne* 525

Page

Cryptobium luridum 512, 792
—— *luridum* 513
—— *maxillosum* 532
—— mexicanum 530
—— mixtum 515
—— modestum 518
—— *modestum* 519
—— monticola 530
—— nasutum 526
—— nigriventre 526
—— *nigriventre* 506, 527, 528
—— ovaticeps 524
—— *ovaticeps* 525
—— palustre 511
—— *palustre* 512
—— perforatum 527
—— placidum 792
—— planatum 532
—— politulum 516, 793
—— puncticolle 518
—— *puncticolle* 522
—— rostratum 532, 793
—— *rostratum* 506, 533
—— rubeculum 513
—— *ruficolle* 507, 508
—— rugosipenne 523
—— salvini 509
—— *scrobiculatum* 533
—— sedatum 792
—— similipenne 520
—— *similipenne* 516, 519, 521
—— speculator 511
—— stipes 509
—— stygicum 517
—— *stygicum* 518, 519, 521
—— subgracile 525
—— *sulphuripes* 528
—— tenuicorne 524
—— *tenuicorne* 523, 525
—— terminatum 512
—— *terminatum* 513
—— tinctipenne 517
—— *tinctipenne* 518, 520
—— *triste* 533
—— umbratum 508
—— *umbratum* 509
—— venustum 516, 793
—— *venustum* 517
CRYPTOPLEURUM 115
Cryptopleurum 113, 114
—— impressum 115
Ctenomastax 640
Cucujus maxillosus 734
CYATHOCERIDÆ 141
CYATHOCERUS 142, 775
—— horni 144, 775

Page

CYBISTER 47, 759
Cybister 46
—— cavicollis 759
—— *dissimilis* 48
—— *ellipticus* 48
—— explanatus 759
—— *fallax* 47
—— fimbriolatus 48, 759
—— flavocinctus 48
—— *giganteus* 47
—— *lævigatus* 46
—— *lherminieri* 47
CYCLONOTUM 94, 769
Cyclonotum 62, 95, 97, 98, 100, 101, 102
—— abdominale 769
—— *cacti* 95
—— centrale 96
—— *centrale* 97, 104, 769
—— dispar 95, 769
—— *dispar* 96
—— externum 769
—— grossulum 96
—— *opuntiæ* 96
—— posticatum 769
—— subdepressum 95
—— *subdepressum* 96
—— tibiale 97
—— *tibiale* 769
CYCLOTYPUS 100
—— godmani 100
—— *godmani* 101
—— latissimus 101
Cyllidium 86
CYLLŒPUS 129
Cyllœpus 134
—— optatus 129
Cymbiodyta 66, 70, 71
CYRTOTHORAX 340, 783
—— bullatus 340
—— buphthalmus 340
—— *buphthalmus* 341
—— cyanescens 341
—— fulgidus 341
—— *sallei* 340
—— salvini 341, 783

DACNOCHILUS 554
—— lætus 554
Dactylosternum 94, 95, 96, 103, 769
—— *abdominale* 769
—— *insulare* 769
—— *rousseti* 769
DEINOPSINI 294
DEINOPSIS 294

Page

Deinopsis angusta 295
—— ferruginea 294
DELTOSTETHUS 114
—— palpalis 115
—— sulcatus 114
—— *sulcatus* 115
DERALLUS 77, 765
Derallus 78
—— *altus* 765
—— angustus 78
—— rudis 765
DERODERUS 577
Deroderus 579
—— difficilis 578
—— *difficilis* 577
—— latipes 578
—— punctipennis 578
—— vestitus 577
DERONECTES 26, 754
Deronectes 27
—— æquinoctialis 27, 754
—— grammicus 754
—— opaculus 27
—— striatellus 27
DESMOPACHRIA 16, 752
Desmopachria 17
—— bryanstoni 18
—— circularis 18
—— *circularis* 752
—— dispar 17
—— *dispar* 19
—— glabricula 18, 752
—— *lævis* 17, 18
—— mexicana 19, 752
—— *mutata* 18
—— polita 17
—— portmanni 17
—— speculum 752
—— striola 752
—— *varians* 752
—— variegata 16
—— *variegata* 17, 19
—— vicina 752
Dianous 640
DIBELONETES 601, 797
Dibelonetes 596, 602, 606
—— biplagiatus 602
—— fragilis 602
—— laticeps 603
—— *laticeps* 604
—— latitans 606
—— occultus 605
—— pallipes 603, 797
—— panamensis 604
—— pictipes 605
—— posticalis 604

Page

Dibelonetes robustus 603
—— *robustus* 604
—— tristigma 605
DIESTOTA 247, 779
Diestota 253, 273, 291, 780
—— brevicornis 250
—— civica 779
—— convexa 253
—— crassa 248
—— debilis 250
—— docilis 251
—— foveata 249
—— funebris 252
—— funesta 247
—— homalotoides 780
—— laticornis 248
—— lativentris 252
—— microps 251
—— *microps* 252
—— nitens 251
—— proxima 249
—— sperata 250
—— *sperata* 247, 249
Diglossa 287
Dinarda 284
DINEUTES 49
Dineutes 48
—— discolor 49
—— longimanus 49
—— solitarius 49
—— sublineatus 49
—— truncatus 49
—— vittatus 49
Dinusa 284
DIOCHUS 466, 791
—— inornatus 466
—— longicornis 791
—— nanus 466
—— *nanus* 467
—— schaumi 467
—— vilis 467
Diococephalus 371
DISERSUS 127
Disersus 128
—— longipennis 127
Drusilla 211, 212, 213
DRYOPS 119, 774
Dryops 120, 122, 123
—— elmoides 121
—— fastigiatus 121
—— productus 120
—— *productus* 121
—— puncticollis 121, 774
—— suturalis 121
DYTISCIDÆ 3
DYTISCUS 43

Page

Dytiscus basilaris 45
—— *calidus* 42
—— *circumscriptus* 44
—— *fimbriolatus* 48
—— habilis 43
—— *interrogatus* 41
—— *lævigatus* 46
—— *posticatus* 39
—— *sticticus* 46
—— *unistriatus* 23

ECBLETUS 708
—— simplex 708
ECHIASTER 591
Echiaster 595
—— championi 593
—— curtus 594
—— filum 592
—— funebris 593
—— lativentris 594
—— *lativentris* 595
—— *melanurus* 593
—— minutus 593
—— orbifer 592
—— *signatus* 592
—— solitarius 592
Echidnoglossa 237
EDAPHUS 640
—— euplectoides 640
ELEUSININA 728
ELEUSIS 728
Eleusis 704, 709, 729, 732, 733
—— bicolor 729
—— bicolor, var. divisa 729
—— *bicolor* 731
—— breviceps 731
—— *breviceps* 732
—— corvina 730
—— *fasciata* 730
—— fenestrata 730
—— flavipennis 731
—— infima 731
—— insignis 732
—— *interrupta* 731
—— mixta 732
—— pallidipennis 730
—— *pallidipennis* 731
—— rufula 729
—— *rufula* 730
—— scita 731
—— *scita* 732
ELMINI 129
ELMIS 133
Elmis 122, 125, 130, 134
—— *angustatus* 134, 136
—— apicalis 136

Page

Elmis bufo 140
—— championi 134
—— *championi* 135
—— curtulus 139
—— *curtulus* 140
—— distortus 137
—— formosus 140
—— granulosus 136
—— heteroceros 135
—— inæqualis 137
—— longicollis 138
—— *nitens* 136
—— nodipes 138
—— sculptipennis 135
—— sulcicollis 139
—— *sulcicollis* 140
ELMOPARNUS 125
—— brevicornis 125
Elophorus 88
—— *aquaticus* 88
—— *grandis* 88
ELSIANUS 131
Elsianus 133, 135, 136
—— graniger 133
—— robustus 132
—— *robustus* 133
—— striatus 132
Emus 370
—— *fuscomaculatus* 378
ENHYDRUS 48, 760
—— atratus 48, 760
Enochrus 67, 68
—— *bicolor* 67
Enoplurus 78
EPIMETOPUS 88
—— costatus 88
EPIPEDA 240
Epipeda 243
—— angusticeps 245
—— brevicornis 242
—— debilis 244
—— *debilis* 245
—— delicatula 242
—— discedens 245
—— linearis 246
—— *linearis* 247
—— longiceps 244
—— longula 241
—— minor 241
—— minuta 241
—— *minuta* 242
—— *plana* 240, 243, 246
—— pumila 243
—— puncticeps 244
—— reyi 246
—— *reyi* 247

Page

Epipeda rufa 240
—— *rufa* 241, 242
—— sordida 243
—— *sordida* 244, 245
ERCHOMUS 298, 781
Erchomus 295, 296, 307, 308
—— affinis 301
—— apicicornis 303
—— chontalensis 301
—— cinctiventris 304
—— *cinctiventris* 305
—— *convexus* 306
—— debilis 299
—— distans 299
—— *distans* 300
—— dubius 302
—— flavipalpis 305
—— *flavipalpis* 306, 307
—— glabripennis 300
—— gravidus 306
—— ignavus 305
—— impressus 306
—— *inclusus* 304
—— lævis 304
—— mollis 307
—— politulus 298
—— *politulus* 299, 300
—— *rotundatus* 306
—— ruficornis 303
—— rutilus 304
—— *scutellatus* 301
—— segnis 301, 781
—— *segnis* 302, 307
—— sinuatus 302
—— *sinuatus* 307
—— strigosus 299
—— tachyporinus 299
—— truncatus 300
—— *truncatus* 301
—— ventralis 306
—— vicinus 305
—— *vicinus* 304
ERETES 46
—— sticticus 46
Erichsonius 457
EUDERA 282
Eudera 278
—— cava 282
Eulissus 475, 487
—— *chalybeus* 476
EUMALUS 732
—— nigriceps 733
—— strigosus 733
Eunectes 46
—— *griseus* 46
Euplectus 640

Page

Euryglossa 287, 292
Euryporus puncticollis 343
EUSCLERUS 575
—— rugifrons 576
—— sordidus 576
EUSCOPÆUS 548
—— crassitarsis 548
—— *crassitarsis* 549
—— gracilicornis 548
EUSTILICUS 579, 796
Eustilicus 580
—— crassidens 579
—— *crassidens* 580
—— gracilis 580
—— mexicanus 580, 796
—— orbifer 579
EUTHORAX 163
—— pictipennis 163
EUVIRA 278
Euvira 282
—— debilis 281
—— difficilis 280
—— discedens 281
—— fuscipes 280
—— godmani 280
—— *godmani* 281
—— longula 279
—— *longula* 280
—— minuta 281
—— nigra 279
—— *nigra* 280
EVÆSTHETINÆ 639
Evæsthetus 640

FALAGONIA 212
—— crassiventris 213
—— mexicana 213
FALAGRIA 232
Falagria .. 211, 229, 231, 233, 234, 235, 237, 238, 282, 287
—— *alboguttata* 231, 232
—— *bilobata* 236
—— *cingulata* 237
—— *concinna* 240
—— *currax* 233
—— *curtipennis* 233
—— *deliciata* 229
—— denigrata 234
—— *divisa* 240
—— *fauveli* 233
—— *fovea* 233
—— infima 233
—— inornata 234
—— *inornata* 232
—— *mexicana* 213
—— *nigra* 234

Page

Falagria nitidula 233
—— *paræ* 240
—— quadrata 234
—— *sulcata* 236
—— *thoracica* 236
—— *varicornis* 282, 283
—— *venustula* 229, 230
FLOHRIA 391
—— laticornis 392

GANSIA 282
Gansia 231
—— bicolor 283
—— *bicolor* 284
—— tibialis 283
GASTRISUS 359
Gastrisus 368
—— mimetes 360
—— opaculus 359
—— *opaculus* 360
Gaurodytes disintegratus 756
Gauropterus 475, 502
GEORISSIDÆ 141
GEORISSUS 141
—— minor 141
—— *similis* 141
GLENUS 369, 784
—— coxalis 369
—— extimus 784
—— *extimus* 785
—— flohri 369
—— *flohri* 370, 784
—— setosus 784
GLYPTOMA 723
Glyptoma 725
—— *brevicristatum* 726
—— cognatum 724
—— *crassicorne* 723
—— cribellum 724
—— hirticorne 724
—— *hirticorne* 725
—— læviceps 723
—— longipes 723
—— *opacum* 723
—— *punctatoplicatum* 723
—— *ruficolle* 727
—— *sallæi* 726
GNYPETA 227
Gnypeta 173, 226, 228
—— fragilis 227
—— *labilis* 227
—— mexicana 228
—— nigricans 227
—— *nigricans* 228
Gymnurus 618
GYRETES 51, 761

Page

Gyretes acutangulus 52, 761
—— boucardi 51
—— guatemalensis 761
—— leionotus 51, 761
—— levis 51
—— *levis* 761
—— mexicanus 761
—— minor 761
—— *morio* 52
—— proximus 52
—— *saltatrix* 51
GYRINIDÆ 48
GYRINUS 50, 760
Gyrinus 48
—— *buqueti* 48
—— dimorphus 760
—— *longimanus* 49
—— obtusus 50, 760
—— parcus 50
—— *parcus* 761
—— plicatus 760
—— *plicatus* 50
—— plicifer 761
—— *sublineatus* 49
—— turbinator 50, 760
—— *ventralis* 50
—— *vittatus* 49
GYROPHÆNA 254, 780
Gyrophæna 191, 195, 273
—— æqualis 780
—— apicicornis 257
—— brevidens 258
—— chontalensis 262
—— convexa 781
—— *convexa* 261
—— convexicollis 262
—— *convexicollis* 263
—— crassiventris 263
—— discoidalis 259
—— *discoidalis* 781
—— flavipes 258
—— fusciceps 255
—— gracilicornis 264
—— *gracilicornis* 265
—— granulata 258
—— humeralis 260
—— *humeralis* 261
—— jansoni 263
—— miranda 261
—— *miranda* 262
—— oblita 254
—— occulta 265
—— pollens 260
—— *pollens* 261
—— pumila 254
—— *pumila* 255

Page

Gyrophæna sallæi 264
—— *sallæi* 265
—— similis 256
—— sordidula 256
—— *sordidula* 257
—— *sparsa* 258, 262
—— *splendidula* 260
—— varians 255
—— zunilensis 781

HALIPLIDÆ 1
HALIPLUS 2, 748
—— curtulus 748
—— *punctatus* 2
—— robustus 2
—— *robustus* 748
—— signatus 2
—— solitarius 2
Haploglossa 156
Helichus 119, 120
—— *basalis* 121
—— *fastigiatus* 121
—— *productus* 120
—— *suturalis* 121
HELOCHARES 74, 765
Helochares 66, 70, 72, 73, 77
—— bipunctatus 76
—— championi 75
—— *maculicollis* 76
—— oculatus 74, 765
—— regularis 76, 765
—— sallæi 75
—— seriatus 76, 765
HELOPELTIS 77
—— larvalis 77
Helophilus 74
HELOPHORUS 88, 768
Helophorus 85
—— ——? 768
—— ——? 768
—— *æneipennis* 89
—— aquaticus 88
—— *linearis* 89
—— *lineatus* 89
—— minutus 768
—— regularis 89
—— *regularis* 768
HEMIOSUS 84, 767
—— maculatus 85, 767
Hemistenus 640
Henicocerus 90, 91
Hesperus 390, 392, 413
HETERELMIS 130, 775
Heterelmis 132, 133
—— longulus 775
—— obesus 131

Page

Heterelmis obscurus 130
—— *obscurus* 131
—— simplex 131
HETEROCERIDÆ 116
HETEROCERUS 116, 772
Heterocerus americanus 772
—— armatus 117
—— cognatus 773
—— debilis 116
—— *debilis* 772
—— *femoralis* 773
—— *flavidus* 117, 772
—— *gnatho* 117
—— mexicanus 118
—— *mexicanus* 773
—— simplex 117
—— *simplex* 773
—— spinifer 119
—— velutinus 773
—— vilis 773
HETEROLEUCUS 629
—— marginatus 629
—— *marginatus* 630
—— mexicanus 630
HETEROLINUS 475
—— puncticeps 475
HETEROTHOPS 323
—— insolita 323
—— orbicularis 324
—— remota 323
—— *remota* 324
—— tenuicornis 324
HETERYON 103
—— depressus 103
HEXANCHORUS 127, 775
—— gracilipes 128, 775
HOLISUS 462
Holisus 414
—— *ater* 463
—— atratulus 464
—— confinis 462
—— elatus 465
—— eleusoides 466
—— filum 464
—— oblitus 465
—— pallens 464
—— prolixus 463
—— *prolixus* 464
—— protensus 462
—— *protensus* 463
—— rufipes 464
—— solskyi 463
HOLOTROCHUS 682
Holotrochus 716
—— centralis 684
—— *clavipes* 716, 718

Page

Holotrochus cylindrus 684
—— *fauveli* 716, 718
—— marginatus 684
—— picescens 683
—— politus 683
—— rufopygus 683
—— simplex 683
—— uniformis 684
Homalium 744
HOMALOLINUS 472
Homalolinus 475
—— affinis 473
—— apicalis 474
—— canaliculatus 472
—— *canaliculatus* 473
—— dilutus 473
—— *dilutus* 474
—— divisus 474
—— divisus, var. guatemalenus 474
—— flavipennis 473
—— sanguineus 474
HOMALOTA 172, 779
Homalota ... 154, 163, 177, 189, 190, 191, 193, 196, 197, 201, 202, 203, 204, 214, 224, 227, 243, 249, 271, 277, 289, 291, 780
—— alticola 174
—— *analis* 176
—— *anceps* 188
—— annulata 190
—— *aterrima* 188
—— *atramentaria* 186
—— *atrata* 179
—— *basalis* 154
—— basiventris 192
—— brevis 189
—— *cambrica* 173
—— carinata 176
—— centralis 174
—— certata 184
—— *certata* 185
—— championi 192
—— *championi* 193, 779
—— chiriquensis 184
—— *chiriquensis* 178
—— cingulifera 194
—— *cingulifera* 195
—— *cinnamoptera* 181
—— cognata 181
—— *cognata* 182
—— colorata 180
—— consimilis 173
—— consors 172
—— *consors* 173
—— *culpa* 199
—— despecta 180

Page

Homalota diffinis 178
—— discrepans 191
—— *discrepans* 192, 273
—— dissimilis 173
—— evanescens 177
—— *evanescens* 178
—— *exilis* 177
—— flavicauda 189
—— *fragilis* 173
—— *fungi* 185, 203, 205, 224
—— godmani 193
—— *gregaria* 173
—— guatemalæ 175
—— *guatemalæ* 176
—— heterocera 180
—— *heterocera* 182, 183
—— hirtiventris 187
—— *hospita* 205
—— *incognita* 175
—— *intermedia* 184
—— jugicola 186
—— *jugicola* 187
—— *lacrymosa* 154
—— læticula 189
—— *læticula* 190
—— *læviventris* 195
—— *languida* 291
—— leucoptera 182
—— libera 175
—— *longicornis* 181, 182
—— longifrons 178
—— longipennis 190
—— *longipennis* 191
—— *macrocera* 188
—— mollis 191
—— montium 186
—— *montium* 187
—— mundula 187
—— *nigra* 179, 180
—— *nitidula* 204
—— ornatula 779
—— *pavens* 173
—— pectoralis 177
—— perdita 182
—— *perdita* 183, 184
—— prolixa 195
—— *puberula* 196
—— pumila 186
—— quæsticula 188
—— rufiventris 193
—— sallæi 183
—— *scapularis* 180
—— semiobscura 179
—— sobrina 185
—— *socialis* 204
—— *sodalis* 185

Page

Homalota sordidula 185
—— *sordidula* 186
—— spergula 179
—— terminicornis 183
—— *testaceipes* 249
—— thoracica 188
—— trisignata 194
—— *trisignata* 195
—— vexata 176
—— *xanthoptera* 163, 175, 179
Homœotarsus 506, 507
HOPLANDRIA 219, 779
Hoplandria 214, 222
—— arguta 779
—— brevicollis 220
—— *brevicollis* 221
—— debilis 224
—— digna 220
—— *digna* 221
—— flavicans 222
—— gemina 219
—— lugubris 223
—— peltata 223
—— picea 221
—— rufa 221
—— vestita 222
HOPLOMICRA 273
—— clavicornis 274
HYDATICUS 43, 758
—— amazonicus, var.? 758
—— *flavo-maculatus* 45
—— *marmoratus* 45
—— rimosus 43
—— subfasciatus 43
HYDRÆNA 93
—— brevis 94
—— longicollis 93
—— *longicollis* 94
—— puncticollis 93
—— *puncticollis* 94
—— sordida 94
HYDROBIUS 64, 764
Hydrobius 61, 62
—— armatus 64, 764
—— debilis 65, 764
—— *limbatus* 65
—— subcupreus 64, 764
—— *subcupreus* 65
HYDROCANTHUS 7
Hydrocanthus 295
—— atripennis 7
—— debilis 8
—— *indicus* 7
—— lævigatus 7
—— *lineatus* 6
—— marmoratus 8

Page

Hydrocanthus texanus 7
Hydrochare 61
HYDROCHARIS 61, 764
—— perfectus 61, 764
HYDROCHUS 89
Hydrochus 84
—— debilis 89
—— *debilis* 90
—— obscurus 90
—— *rufipes* 89
HYDROCOMBUS 70, 764
Hydrocombus 66, 71
—— brevicollis 71
—— fraterculus 71, 764
—— politus 72
HYDROPHILIDÆ 53
HYDROPHILUS 54, 761
Hydrophilus 61
—— *apicipalpis* 55
—— ater 54, 761
—— *brasiliensis* 54
—— *collaris* 55
—— *dorsalis* 763
—— *estriatus* 97
—— insularis 54
—— *lateralis* 60, 763
—— *limbalis* 763
—— *nimbatus* 60
—— *pilatei* 54
—— pollens 762
—— *subcupreus* 64
—— *sublævis* 763
—— triangularis 54
—— violaceo-nitens 762
HYDROPORUS 28, 754
Hydroporus 19, 26, 27
—— *addendus* 754
—— *adumbratus* 25, 26
—— *æquinoctialis* 27, 28, 30
—— *affinis* 23, 24
—— *apicatus* 20
—— axillaris 755
—— bifidus 30
—— *bryanstonii* 18
—— *caraïbus* 26
—— *charlottii* 23
—— civicus 755
—— corvinus 754
—— decemsignatus 29
—— *decemsignatus* 28, 30
—— *emilianus* 23
—— *exiguus* 21
—— *fryii* 22
—— *fuscatus* 24
—— *goudotii* 21
—— *granum* 19

Page

Hydroporus infacetus 26
—— infaustus 28
—— interjectus..... 29
—— kingi 30
—— *lacustris*..... 24
—— *latissimus* 19
—— *leconteii* 15
—— libens..... 29
—— *magensis* 24
—— *medialis*..... 26
—— mexicanus..... 28
—— *mexicanus* 29, 30
—— *modestus* 755
—— nebulosus 29
—— nudatus..... 30
—— *pictodes* 20, 22
—— *portmanni* 17
—— *pulicarius* 26
—— *pullus*..... 25, 754
—— *pumilus* 21
—— roffi 28
—— sericatus 30
—— *striatellus* 27, 28
—— *undulatus* 30
—— vilis 755
—— *vilis* 30
—— *wardii* 26
Hydrotrupes palpalis 32
Hydrous 54, 61
HYDROVATUS 14, 751
Hydrovatus 15, 20
—— *brevipes* 15
—— *clypealis* 15
—— *compressus*..... 15
—— concolor 751
—— inornatus..... 15, 751
—— lecontei..... 15
—— major..... 15
—— obscurus 15, 751
HYMENEUS 487
—— amethystinus 489
—— cephalotes..... 488
—— divisus 488
—— godmani 487
—— *godmani* 488, 489
—— læticulus 489
—— splendens 488
Hyphidrus 16
Hyphydrus obniger 16
Hypocyphtus 297
HYPOCYPTUS..... 297
Hypocyptus 292
—— debilis 297
HYPOTELUS 710
—— hostilis 710
—— *hostilis* 711

Page

Hypotelus lucidus..... 710
—— marginatus 711
—— *micans* 710
—— *pusillus* 710

ISANOPUS 360
—— sallæi..... 360
Isomalus..... 728
—— *bicolor* 729
—— *fasciatus* 730
—— *nigrellus* 733
—— *pallidipennis* 730
—— *tenuis*..... 730

LACCOBIUS..... 77
—— ellipticus 77
Lacconectes..... 35
LACCOPHILUS 9, 749
Laccophilus..... 35
—— agilis 750
—— americanus 11
—— *americanus* 749
—— apicalis 10, 749
—— *atristernalis* 9
—— *bifasciatus* 12
—— championi 14
—— *championi* 9
—— confusus 11, 749
—— decipiens..... 10, 749
—— duplex 12, 750
—— *duplex* 9
—— filicornis 750
—— fragilis 751
—— *fumatus*..... 12
—— fuscipennis 10, 749
—— insignis 750
—— lævipennis 12
—— *lævipennis* 9, 13
—— *latifrons* 13
—— mexicanus..... 9
—— *mexicanus* 10
—— mistecus 9
—— *mistecus*..... 10
—— optatus 13
—— *optatus* 9, 750
—— oscillator..... 11, 750
—— *oscillator* 9, 12
—— ovatus 14
—— *ovatus* 751
—— pictus 11
—— salvini 10
—— spergatus 10
—— suavis 13
—— *suavis* 9
—— suffusus..... 749
—— *suffusus* 750, 751

Page

Laccophilus terminalis..... 11
—— *truncatus* 10
—— *venustus*, var.? 13
LAMPROPYGUS 346
—— analis..... 348
—— *analis*..... 347
—— *bicolor* 347
—— cognatus 347
—— *cognatus* 348, 360
—— xanthopygus 347
—— *xanthopygus* 348
Lareynia..... 133, 134
LATHROBIINA 506
LATHROBIUM 536, 794
Lathrobium.. 534, 538, 550, 555, 628
—— *bicolor* 514
—— clandestinum 537
—— dimidiatum 538
—— *dimidiatum* 794
—— durangoense 794
—— flavidulum 794
—— guatemalense 536
—— *guatemalense*..... 538
—— mexicanum 537
—— *minor*..... 537
—— *parallelum*..... 537
—— pusillum 794
—— relictum 538
—— *rufo-partitum* 538
—— *similipenne* 520, 521
—— *sphæricolle*..... 694
LATHROPINUS 628
Lathropinus 620
—— parallelus 628
Leistotrophus 371
—— *versicolor* 371
LEPTACINUS 489
Leptacinus 490, 494, 495
—— *clavicornis*..... 495
—— *debilis* 495
—— *filarius* 503
—— grandiceps..... 490
—— *nitidus* 495
—— oscillans 490
—— *subtilis* 495
LEPTOCHIRINA 733
LEPTOCHIRUS 733
Leptochirus..... 734, 740, 741
—— *angustulus*..... 736
—— *bicornis* 733, 741
—— brunneo-niger 734
—— *cayennensis* 734
—— cephalotes..... 740
—— edax 736
—— *edax* 737, 738
—— extimus 735

Page

Leptochirus extimus 734
—— gracilis 738
—— *idæ* 733
—— *laticeps* 733
—— maxillosus 734
—— *maxillosus* 735
—— mexicanus 739
—— *mexicanus* 734, 736, 738
—— molossus 735
—— *molossus* 736, 737, 738
—— proteus 735
—— *proteus* 734
—— punctiger 738
—— quadricollis 739
—— *quadridens* 733
—— ramosus 740
—— *scoriaceus* 734, 736, 737
—— serriger 738
LEPTOGLOSSA 195
—— puberula 196
LEPTONIA 196
Leptonia 194
—— picta 196
—— *picta* 197
Leptorus 795
Leucoparyphus 308
Leucotrichus 621
Limnebius 85, 86
Limnius 133, 134, 140
LIMNOCHARIS 85
Limnocharis 86
—— *piceus* 86
—— sinuatus 86
Linidius extremus 499
—— *tenuipes* 499
LINODERUS 452
—— gracilipes 452
LISPINUS 718
Lispinus 716, 720, 721, 723
—— anguinus 720
—— bicolor 721
—— brevicollis 722
—— catena 719
—— dejectus 721
—— *exiguus* 718
—— fauveli 720
—— *fauveli* 721, 722
—— flavipennis 721
—— *flavipennis* 722
—— granadensis 719
—— *granadensis* 720
—— *insularis* 720
—— laticollis 718
—— *linearis* 720
—— longicornis 722
—— *obscurus* 720

Page

Lispinus planellus 722
—— planus 720
—— quadripunctulus 718
—— *quadripunctulus* 719
—— *rufescens* 718
—— sculpturatus 721
—— striola 719
—— tardus 719
—— *tenellus* 720, 721
LITHOCAON 555
—— sparsus 555
LITHOCHARIS 549, 796
Lithocharis 534, 550, 552, 555, 556, 565, 586, 602, 609
—— alticola 552
—— *angularis* 554, 555
—— *ardua* 569, 572
—— *biseriata* 565, 566
—— *compressa* 567
—— *connexa* 566
—— *convexa* 566
—— *corticina* 552, 553
—— *crassula* 561
—— *cribrata* 566
—— curviceps 796
—— *diffinis* 550
—— *discedens* 565, 566
—— discoidalis 551
—— *egena* 569, 570, 571
—— *fuscipennis* 553
—— *germana* 554
—— *gigantea* 557
—— *hepatica* 552, 553
—— hilaris 551
—— *humilis* 569
—— *incompta* 567
—— infuscata 552
—— *integra* 567
—— *latro* 552
—— limbata 550
—— *limbata* 551
—— *macularis* 554
—— mendax 550
—— *mendax* 796
—— *munda* 556
—— ochracea 551
—— *oculata* 569, 575
—— *pagana* 554
—— *parvicollis* 569
—— *picta* 554
—— *polita* 554
—— *quadrata* 570
—— *sobrina* 551
—— *staphylinoides* 552
—— *vestita* 569
LITHOCHARODES 491

Page

Lithocharodes armata 491
—— *armata* 492
—— collaris 494
—— flohri 492
—— fuscipennis 492
—— *fuscipennis* 493
—— fusciventris 492
—— fuscula 494
—— germana 492
—— gracilis 493
—— puncticeps 493
—— rufula 494
—— simillima 491
—— sordida 493
—— spinigera 491
—— *spinigera* 492
Lordithon 316
Lutrochus 129
—— *australis* 129
LYPETICUS 556
Lypeticus 557
—— celatus 556
—— *mundus* 556

MACROVATELLUS 8
—— mexicanus 8
MASEOCHARA 154, 777
—— depressa 155
—— *depressa* 154, 156
—— duplicata 156
—— *duplicata* 154
—— gracilis 155
—— högei 777
—— opacella 154
—— *opacella* 155
—— robusta 155
—— semivelutina 154
—— *semivelutina* 155
Mecognathus 596
Medon ..549, 552, 556, 557, 561, 569, 576, 577, 587
MEGACRONUS 317, 782
Megacronus 316
—— acuminatus 318
—— meridionalis 319
—— *meridionalis* 782
—— mexicanus 782
—— minor 320
—— nigerrimus 318
—— oscillans 318
—— regularis 319
—— *regularis* 320
MEGADYTES 46, 759
—— fallax 47
—— flohri 47
—— *flohri* 46

Page

Megadytes fraternus 47, 759
—— giganteus 47, 759
—— lævigatus 46
—— obesus 47
MEGALOPINÆ 667
MEGALOPS 668
Megalops 142, 640, 667, 669, 674
—— adjectus 669
—— armatus 670
—— basalis 674
—— *cephalotes* 676
—— cognatus 672
—— cruciger 668
—— *cruciger* 669, 670, 671, 672
—— elegans 672
—— guatemalenus 673
—— *guatemalenus* 674
—— impressus 676
—— incultus 675
—— *incultus* 676
—— ineptus 671
—— integer 671
—— *integer* 672
—— mexicanus 669
—— modestus 671
—— morosus 670
—— obscurus 674
—— panamensis 673
—— peploides 675
—— *peploides* 674
—— politus 673
—— porcatus 675
—— præditus 672
—— *præditus* 668
—— puncticeps 676
—— *spinosus* 676
—— vulneratus 674
MEGARTHRUS 743
—— *sinuaticollis* 743
—— solitarius 743
—— zunilensis 743
MEGASTERNUM 113, 772
—— strigicolle 113, 772
MERONA 229, 779
Merona 231
—— brevicollis 230
—— fragilis 230
—— polita 230
Meronera 779
MESONOTERUS 4
—— lævicollis 4
MESPALERUS 560
—— debilis 560
—— flavipennis 560
—— piesticulus 561
—— præustus 560

Page

Mespalerus præustus 561
METACYMUS 65
—— parvulus 66
METOPONCUS 503
Metoponcus 505
—— cingulatus 503
—— filarius 503
—— *filarius* 504
—— guatemalensis 503
—— holisoides 505
—— longiceps 504
—— minutus 505
—— sinuatus 505
—— varians 504
—— *varians* 505
Microcera 293
MICROGLOSSA 156
Microglossa 157
—— mexicana 157
—— *pulla* 157
MICROPEPLINÆ 747
MICROPEPLUS 747
—— acumen 747
MIMOSTICUS 327
Mimosticus 328
—— viridipennis 328
MISANTLIUS 393, 786
Misantlius 395
—— carinulatus 394
—— discedens 395
—— optatus 394
—— rufipennis 786
—— torquatus 394
Mitomorphus 494, 495
MONISTA 589
Monista 569
—— concolor 589
—— *concolor* 590
—— diffinis 591
—— *longula* 590
—— picturata 591
—— plagiata 590
—— similis 590
—— strigicollis 590
—— *strigicollis* 591
—— *typica* 590
MONOCHARIS 569
—— vestita 569
Morychus 126
MUSICODERUS 455
—— cephalotes 455
—— *cephalotes* 456
—— gracilis 456
MYCETOPORUS 320
Mycetoporus 317
—— coxal 320

Page

MYLLÆNA 285
Myllæna 162, 291
—— debilicornis 286
—— fragilis 286
—— *glauca* 286
—— *intermedia* 285, 286
—— mollis 285
—— *mollis* 286
—— obtusa 286
—— robusta 287
Myrmecochara 163
—— *pictipennis* 163
MYRMEDONIA 198
Myrmedonia .. 163, 196, 203, 204, 205, 209, 210, 213, 214, 219, 225
—— breviceps 207
—— brevicollis 201
—— *canaliculata* 209
—— *collaris* 209
—— confinis 200
—— diluta 201
—— *diluta* 202
—— docilis 205
—— fallax 206
—— fauveli 199
—— *fauveli* 200, 201, 202
—— filicornis 203
—— flavicornis 200
—— *flavicornis* 201, 202
—— fragilis 202
—— godmani 206
—— homalotoides 203
—— *homalotoides* 202
—— *labida* 199
—— lævior 204
—— laxicornis 202
—— *laxicornis* 203
—— longipes 207
—— *longipes* 209
—— mimula 209
—— *nitidula* 208
—— plebeia 203
—— pusilla 205
—— *scabripennis* 207
—— setigera 200
—— teres 208
—— *teres* 209
MYRMEDONIINA 170

NAUSICOTUS 368
—— spectabilis 369
NEOLARA 231
Neolara 229
—— centralis 231
NEOMEDON 557
Neomedon 556, 560

Page

Neomedon densus 559
—— *densus* 560
—— flohri 559
—— mexicanus 558
—— *mexicanus* 559
—— mollis 558
—— nigricans 559
—— *nigricans* 560
—— princeps 557
—— puncticeps 559
—— rufipennis 557
—— sallæi 558
NITIDULODES 112, 772
—— jansoni 112, 772
Noterus 4
—— *lævigatus* 7
NOTOMICRUS 3
—— gracilipes 3
—— *gracilipes* 4
—— *lævigatus* 4
—— politus 3
—— *traili* 3
NUDOBIUS 502
Nudobius 472, 475
—— celatus 502
—— *lentus* 501, 502

OCALEA 169
Ocalea 278
—— dejecta 169
OCTHEBIUS 90, 768
Octhebius 769
—— apicalis 91
—— aztecus 768
—— crassipes 90
—— obscurus 92
—— parvulus 91
—— *parvulus* 769
—— *pilosus* 92
—— *pygmæus* 92
—— *rufo-marginatus* 91
—— similis 92
OCYOLINUS 362
—— amethystinus 363
—— *amethystinus* 362
—— *rugatus* 363
OCYOTA 163
—— dubia 163
Ocypus 392, 628
ODONTOLINUS 454
—— fasciatus 454
ŒDODACTYLUS 630, 798
—— *anceps* 798
—— aper 798
—— fauveli 630
—— *fusco-brunneus* 630

Page

OLIGOTA 293, 781
Oligota 177, 191, 192, 278, 292
—— centralis 293
—— *granaria* 293
—— lævigata 781
—— lævipennis 293
—— *parva* 294
—— polita 293
—— *polita* 781
—— *pygmæa* 293
—— teres 294
OLIGOTINA 287
Olisthærus 708
OMALIINÆ 744
OMALIUM 744
Omalium 708, 746
—— anceps 745
—— atomarium 746
—— *atomarium* 745
—— faustum 746
—— *flebile* 745
—— incultum 746
—— læticulum 747
—— *præustum* 745
—— pumilio 746
—— sordidum 744
—— *sordidum* 745
—— triste 745
—— *xanthopterum* 745
ONTHOSTYGNUS 392
Onthostygnus 393
—— fasciatus 392
—— *fasciatus* 393
—— pollens 393
OOCYCLUS 61, 764
Oocyclus 62
—— brevicornis 63
—— *brevicornis* 62, 64
—— maculatus 63, 764
—— *maculatus* 62
—— vestitus 62, 764
OOSTERNUM 112, 772
Oosternum 114
—— costatum 113, 772
Ophioglossa 282
OPHIOMEDON 567
Ophiomedon 565, 569
—— longiceps 568
—— longulus 568
—— stipes 567
—— subtilis 568
ORPHNEBIUS 209
Orphnebius 210
—— lativentris 210
—— *lativentris* 211
—— similis 211

Page

ORUS 549
Orus 556
—— guatemalenus 549
OSORIINA 677
OSORIUS 677, 800
—— boops 679
—— *boops* 680
—— canaliculatus 678
—— crassus 681
—— cylindricus 680
—— debilis 681
—— *debilis* 682
—— dubius 679
—— germanus 680
—— lævigatus 679
—— *latipes* 682
—— micros 682
—— mundus 681
—— opacifrons 680
—— parcus 680
—— *parcus* 681
—— puncticeps 678
—— salvini 682, 800
—— vicinus 678
Oxynoptilus 14
OXYPODA 159
Oxypoda .. 151, 160, 162, 163, 189, 190, 291
—— *aliena* 163
—— *alternans* 160
—— carinata 161
—— certata 159
—— championi 160
—— *championi* 161
—— clavigera 159
—— inepta 161
—— microps 161
—— *opaca* 161
—— palpalis 162
—— *palpalis* 159
—— plebeia 160
OXYPORINÆ 676
OXYPORUS 676
—— flohri 677
—— mexicanus 677
OXYTELINA 685
OXYTELINÆ 677
OXYTELUS 687
Oxytelus 689, 691, 704
—— armatifrons 692
—— *armatus* 800
—— *bicornis* 712
—— carbonellus 690
—— *depressus* 691
—— derasus 689
—— emeritus 691

Page

Oxytelus exaratus 693
—— externus 694
—— fragilis 691
—— *fuscipennis* 688
—— incilis 693
—— insignitus 689
—— *laqueatus* 688
—— latifrons 693
—— lucidus 689
—— luteipennis 688
—— *luteipennis* 689
—— *mexicanus* 688
—— *nanus* 691
—— principalis 688
—— spinifrons 691
—— *spinifrons* 692, 693
—— stipes 692
—— strigosulus 690
—— vilis 690

PACHYDRUS 16
—— cribratus 16
—— politus 16
Pachyglossa 291
PÆDERALLUS 456
—— fragilis 457
PÆDERINA 609
PÆDERINÆ 506
PÆDEROMIMUS 438
Pæderomimus 439, 448, 454, 455, 456
—— *abactus* 438
—— *aberrans* 438, 449
—— *æneicollis* 438
—— *æniceps* 438
—— angularius 443
—— *angularius* 438
—— angusticollis 447
—— *angusticollis* 439, 448
—— basipennis 450
—— *capitalis* 438
—— capitatus 441
—— cephalax 446
—— chontalensis 440
—— *cognatus* 438
—— confertus 449
—— *conformis* 438
—— contractus 448
—— corrosus 451
—— cribratus 450
—— *cribratus* 448, 451
—— cribricollis 448
—— *cribricollis* 450
—— difformiceps 445
—— *difformiceps* 439
—— distans 450
—— gentilis 439

Page

Pæderomimus gentilis 440, 441
—— hilaris 441
—— insolitus 447
—— *insolitus* 448
—— *lætus* 438
—— *longipes* 438
—— *lustralis* 438
—— *lustrator* 438
—— maculipes 445
—— mandibularis 439
—— *mandibularis* 440
—— mexicanus 444
—— nigrinus 442
—— *nigrinus* 438
—— nigripennis 446
—— *nigripennis* 454
—— nobilis 442
—— *nobilis* 455
—— ornatellus 449
—— *ornatellus* 446, 450
—— *palpalis* 438
—— pectoralis 443
—— *pectoralis* 437, 444
—— perforatus 451
—— *propinquus* 438
—— punctipennis 443
—— *punctipennis* 444
—— *regellus* 438
—— salvini 440
—— *salvini* 454
—— simplex 444
—— *simplex* 438
—— *traili* 438
—— vicinus 444
PÆDERUS 609
Pæderus 614
—— *æquinoctialis* 617
—— alticola 609
—— antiquus 615
—— antoniensis 615
—— apicalis 617
—— *apicalis* 618
—— arduus 615
—— columbinus 617
—— cordovensis 616
—— costaricensis 616
—— *costaricensis* 617
—— currax 611
—— *currax* 612
—— erythroderus 612
—— *femoralis* 616
—— filicornis 612
—— lætipes 611
—— *lætipes* 612
—— lætus 613
—— luridiventris 610

Page

Pæderus mexicanus 617
—— *ochraceus* 551
—— pallidus 618
—— rufitarsis 611
—— *rufitarsis* 610
—— *rugepunctatus* 614
—— salvini 610
—— *salvini* 611, 612
—— signaticornis 613
—— *sordidus* 616
—— *tempestivus* 614
—— testaceitarsis 610
—— thoracicus 612
—— *tricolor* 613
—— *ustus* 618
—— velox 611
—— *velox* 612
—— yucateca 614
—— *yucateca* 615, 616, 617
PALAMINUS 631, 798
Palaminus 635
—— apicipennis 636
—— *apicipennis* 633
—— chiriquensis 637
—— cognatus 632
—— concolor 635, 798
—— crenatus 633
—— debilis 638
—— deformis 637
—— *deformis* 634, 638
—— diffinis 639
—— filum 638
—— *fragilis* 639
—— fusciventris 634
—— gracilipes 634
—— humeralis 639
—— insignis 633
—— lacertinus 631
—— *lacertinus* 632
—— longicollis 632
—— mexicanus 635
—— palmatus 636
—— parviceps 631
—— parvulus 637
—— *parvulus* 638
—— rubripennis 635
—— sordidus 634
—— *testaceus* 637
—— validus 632
—— *validus* 633
—— vittatus 639, 798
Paracymus 64
PARNIDÆ 119
PARNINI 119
PARNUS 123, 774
Parnus 125, 132

Page

Parnus centralis 774
—— *centralis* 775
—— detritus 124
—— *fastigiatus* 121
—— major 774
—— mexicanus 124
—— *mexicanus* 774
—— *prolifericornis* 123
—— punctipennis 124
—— *punctipennis* 125, 775
—— pusillus 123, 774
—— *pusillus* 124
PAROSUS 704
—— hilaris 704
Pelioptera micans 206
PELONOMUS 122, 774
—— obscurus 122
—— *obscurus* 123
—— palpalis 122, 774
PELOSOMA 109, 771
Pelosoma 110, 112
—— carinatum 110
—— cercyonoides 111
—— collare 771
—— lafertei 109
—— *lafertei* 110
—— liodes 771
—— ovulum 772
—— prosternale 110
—— *prosternale* 111
—— sordidum 109, 772
—— subcarinatum 111
PEROCHTHES 101, 770
Perochthes 102
—— globulus 102
—— *globulus* 770
—— lævis 770
PESCOLINUS 453
—— palmatus 453
PHÆNONOTUM 97, 770
Phænonotum 98, 100, 769
—— apicale 98, 770
—— collare 99
—— dubium 98, 770
—— *dubium* 99
—— *estriatum* 98
—— lævicolle 99
—— *lævicolle* 100
—— rotundulum 100, 770
—— tarsale 98
—— *tarsale* 99
PHANOCERUS 128
Phanocerus 129
—— clavicornis 129
PHANOLINUS 363, 784
Phanolinus 368

Page

Phanolinus auratus 366
—— discedens 368
—— divisus 365
—— flohri 364
—— godmani 366
—— *godmani* 365, 367
—— gravidus 365
—— *gravidus* 367
—— longulus 367
—— obsoletus 364, 784
—— pollens 365
—— punctatus 367
—— speciosus 367
Philhydrus 70, 74
—— *imbellis* 764
—— *ochraceus* 70
PHILONTHUS 395, 787
Philonthus 328, 336, 346, 347, 361, 363, 388, 389, 390, 392, 393, 396, 397, 404, 413, 429, 437, 438, 453, 456, 787, 788
—— abnormalis 397
—— *abnormalis* 787
—— accedens 403
—— actocharis 788
—— ænescens 408
—— *agnatus* 459
—— alternans 418
—— alticola 400
—— *alutaceus* 398
—— *amazonicus* 415, 416
—— *amœnus* 364
—— *analis* 348
—— *angularius* 443
—— *angusticollis* 447
—— *antennatus* 361
—— apheles 405
—— *apheles* 406
—— apiciventris 419
—— approximans 428
—— armatipes 422
—— *armatipes* 423
—— atriceps 404
—— atricolor 426
—— basiventris 418
—— *basiventris* 420
—— *bicolor* 347
—— boucardi 404
—— *cælites* 437
—— *californicus* 425
—— *caliginosus* 407
—— carinulatus 402
—— *carinulatus* 403
—— cavifrons 408
—— *cavifrons* 422
—— celatus 420

Page

Philonthus celatus 430, 433
—— centralis 422
—— championi 427
—— *championi* 428
—— chiriquensis 404
—— colon 419
—— *corallipennis* 424
—— corticalis 413
—— crassulus 396
—— cribellatus 426
—— *cribricollis* 448
—— cribripennis 403
—— *cupreus* 364
—— *cupripennis* 361
—— *cyanescens* 364
—— deplanatus 423
—— discoideus 409
—— *discoideus* 408
—— discretus 427
—— duploseriatus 427
—— *egregius* 361
—— elegans 428
—— *exiguus* 421
—— extremus 415
—— *extremus* 432
—— *fasciatus* 355
—— feralis 416
—— *feralis* 405
—— *fervidus* 361
—— fibularius 402
—— *fibularius* 403, 404
—— figulus 415
—— fissilis 399
—— *flagrans* 437
—— flavolimbatus 416
—— *flohri* 398
—— fulgipennis 410
—— *fulvipes* 424
—— *fumosus* 416
—— furvus 398
—— *furvus* 399, 400
—— godmani 413
—— *gracilicornis* 788
—— griseolus 399
—— guatemalenus 403
—— heteropus 788
—— hirtiventris 410
—— *hirtiventris* 411
—— högei 400
—— idoneus 411
—— incertus 416, 788
—— infimus 414
—— *infimus* 415
—— *iridiventris* 400
—— iris 401
—— iteratus 788

Page

Philonthus lætipennis 409
—— *lætipennis* 410
—— latecinctus 415
—— longicornis 416
—— *longicornis* 328
—— lucilius 415
—— macilentus 423
—— *macilentus* 424, 425
—— melancholicus 425
—— melanopus 405
—— *melanopus* 406
—— *mexicanus* 400
—— *micans* 425
—— misellus 421
—— *misellus* 422
—— mollis 408
—— *mollis* 409
—— nigerrimus 398
—— nugax 414
—— occultus 407
—— ochromerus 406
—— *ochromerus* 407
—— optatus 427
—— ovaticeps 421
—— oxyporinus 419
—— palmatus 397
—— *palmatus* 787
—— parvimanus 406
—— *pauxillus* 406
—— piceatus 400
—— *piceatus* 401
—— planulatus 407
—— platypterus 412
—— *platypterus* 413
—— prescottianus 787
—— *pretiosus* 363
—— prolixicornis 424
—— punctifer 427
—— quadraticollis 409
—— rectilaterus 425
—— *rufescens* 396
—— rufiventris 787
—— rufocaudus 412
—— *rufo-plagiatus* 400, 401
—— rufopygus 411
—— rusticus 421
—— sallæi 398
—— scintillans 405
—— *scybalarius* 416
—— semiruber 787
—— serpens 422
—— *serpens* 428
—— *serpentinus* 456
—— seticornis 410
—— solitarius 424
—— *splendens* 388

Page

Philonthus stygialis 405
—— tachiniformis 425
—— testaceipennis 400
—— trochanterinus 417
—— *trochanterinus* .. 418, 420, 788
—— *trochilus* 413
—— umbratus 424
—— *varians* 416
—— *viduus* 361
—— vilis 406
—— *vilis* 407
—— xanthomelas 417
—— *xanthomelas* 418, 420, 432, 788
—— xanthopus 420
—— *xanthopus* 433
—— *xanthopygus* 347
—— zunilensis 418
—— *zunilensis* 788
PHILOTERMES 171
—— laxicornis 171
PHILOTHALPUS 354
Philothalpus 361
—— chiriquensis 358
—— debilis 355
—— *deyrollei* 361
—— difficilis 355
—— fasciatus 355
—— mexicanus 357
—— nigriventris 356
—— pæderiformis 359
—— pectoralis 356
—— philonthiformis 358
—— prolixus 357
—— *prolixus* 358
—— segmentarius 355
—— *segmentarius* 356, 357
—— subtilis 358
—— tinctiventris 357
PHILYDRUS 66, 764
Philydrus .. 67, 68, 70, 71, 72, 73, 74
—— æqualis 68, 764
—— *æqualis* 67, 69, 70
—— debilis 69
—— *debilis* 67
—— discedens 67
—— *melanocephalus* 67
—— mexicanus 67
—— *mexicanus* 68
—— nigellus 68
—— *nigellus* 67, 69
—— obscurus 69
—— *obscurus* 67
—— ochraceus 70
—— *ochraceus* 67
PHLŒOCHARINA 708
Phlœocharis 708, 709

Page

Phlœonomus præustus 745
PHLŒOPORA 164, 778
Phlœopora 168
—— alticola 165
—— crassula 167
—— debilis 168
—— fenestrata 164
—— *fenestrata* 165
—— flavipennis 168
—— furcata 167
—— glabra 165
—— grandis 778
—— læticula 166
—— lævigata 778
—— minima 168
—— *reptans* 168
—— rufipennis 166
—— rufula 169
—— sinuata 165
PIESTINA 710
Piestomorphus 462
—— *ater* 463
PIESTUS 712
Piestus 711
—— alternans 714
—— angularis 715
—— *angularis* 716
—— *bicornis* 712
—— *buqueti* 713
—— *capricornis* 711
—— chiriquensis 715
—— costatus 715
—— crassicornis 716
—— *erythropus* 713
—— extimus 713
—— *frontalis* 711
—— *lacordairei* 711
—— *longipennis* 711
—— mexicanus 714
—— minutus 713
—— *minutus* 721
—— niger 712
—— *oxytelinus* 712
—— *penicillatus* 711
—— pygmæus 713
—— *pygmæus* 721
—— *rugosus* 715
—— *spinosus* 711
—— *validus* 711
PINOPHILINÆ 618
PINOPHILUS 620, 797
Pinophilus 621, 624, 628
—— *abax* 629
—— *æqualis* 628
—— agilis 626
—— albipes 621

Page

Pinophilus albipes . . 622, 623, 624, 797
—— *ater* 628
—— basiventris 625
—— *basiventris* 626
—— *bicolor* 626
—— *brevicollis* 629
—— *crassicollis* 629
—— cribricollis 627
—— *dux* 628
—— *egens* 629
—— erythropterus 621
—— *erythropterus* 622
—— *flavipes* 621
—— fragilicornis 624
—— *fulvipes* 628
—— fuscipes 797
—— guatemalenus 623
—— iners 623
—— *iners* 624
—— *laxus* 628
—— lineaticollis 624
—— longicornis 627
—— *major* 628
—— *mimus* 628
—— *modestus* 628
—— opacicollis 624
—— *opacicollis* 797
—— panamensis 622
—— parcus 621
—— *parcus* 622
—— parviceps 622, 797
—— parvicornis 627
—— penetrans 624
—— *penetrans* 625, 626
—— picifrons 797
—— *picipes* 620
—— *rectus* 628
—— reflexus 625
—— *reflexus* 626, 627
—— sejunctus 622
—— *subtilis* 628
—— *tenebrosus* 628
—— *tenuis* 628
—— validus 626
—— *validus* 627
Pityophilus 620
PLACUSA 269
—— confinis 269
—— crassidens 269
—— crassula 273
—— longicornis 272
—— longipes 272
—— minuta 269
—— monilicornis 271
—— obliquata 270
—— *obliquata* 271

Page

Placusa signata 271
—— simplex 270
PLATONICA 214
Platonica 219
—— acuminata 216
—— centralis 217
—— *centralis* 216
—— chiriquensis 218
—— fuscicollis 218
—— *fuscicollis* 220
—— intermedia 216
—— latifrons 217
—— major 215
—— *major* 216
—— sallæi 215
Platydracus 371, 372
PLATYPROSOPINA 783
PLATYPROSOPUS 783
—— mexicanus 783
—— *rectus* 784
PLATYSTETHUS 686, 800
—— americanus 687
—— obscurus 687
—— spiculus 687, 800
Platysthetus 686
—— *americanus* 687
—— *spiculus* 687
PLEURHOMUS 763
—— obscurus 763
PLOCHIONOCERUS 471
Plochionocerus 468
—— brachypterus 471
—— debilis 472
—— formicarius 471
—— *formicarius* 472
—— *minor* 472
PLOCIOPTERUS 351
—— belti 354
—— collaris 352
—— fetialis 351
—— *fetialis* 352
—— histrio 353
—— lugubris 352
—— mollis 353
—— variegatus 353
—— *variegatus* 354
—— varipes 351
POLYLOBUS 158, 777
Polylobus 189
—— advena 158
—— *advena* 777
—— flavescens 777
Polystoma 154
Pomatinus 119
Porus 224
Potamophilus 126, 127, 128, 129

Page

Potamophilus flavicornis 128
—— *goudotii* 127
PRIOCHIRUS 740
Priochirus 733
—— bicornis 741
—— collaris 742
—— dilutus 741
—— divergens 742
—— hæmorrhous 741
—— *hæmorrhous* 743
—— laticornis 742
—— laxus 741
—— *laxus* 742
—— *mandibularis* 740
—— salvini 742
—— *salvini* 743
Pronomæa 287
Pronoterus 4
PROTEININA 743

QUEDIINA 320
QUEDIOMACRUS 339
—— pollens 339
—— puniceipennis 339
QUEDIONUCHUS 336, 783
Quedionuchus 402
—— angustus 338
—— femoralis 338
—— impunctus 336, 783
—— *impunctus* 337, 338, 339
—— nigerrimus 338
—— spinipes 337
—— *spinipes* 338
Quediopsis 327
QUEDIUS 328
Quedius 327, 332, 336, 339
—— advena 329
—— anthracinus 332
—— arrogans 333
—— *attenuatus* 329
—— basiventris 330
—— *buphthalmus* 340
—— *capucinus* 336
—— championi 329
—— concolor 332
—— *cordilleræ* 336
—— flavicaudus 333
—— *flavicaudus* 334
—— graciliventris 331
—— *graciliventris* 332, 333
—— illatus 330
—— *impressus* 336
—— *impunctus* 336
—— jocosus 331
—— læticulus 329
—— mexicanus 334

Page

Quedius protensus 335
—— *puniceipennis* 339
—— rivorum 335
—— rufinasus 333
—— verecundus 334
—— *verecundus* 335

RECHOTA 228
—— impressa 229
RHANTUS 42, 758
—— atricolor 42, 758
—— binotatus 42
—— calidus 42
—— mexicanus 42
—— suffusus 42

SAPHOGLOSSA 291
Saphoglossa 287, 292
—— pictipennis 291
SAUROHYPNUS 501, 791
Saurohypnus 486
—— nigerrimus 791
—— scutellaris 502
SCEPTOBIUS 211
—— dispar 212
SCHIZOCHILUS 371
—— *brasiliensis* 371
—— versicolor 371
SCIOCHARIS 569
Sciocharis 570, 575
—— arribalzagæ 570
—— boops 574
—— capitata 571
—— championi 573
—— cognata 570
—— densicollis 573
—— egena 571
—— *egena* 572
—— flavipennis 575
—— fragilis 574
—— gregaria 573
—— juno 574
—— minuta 574
—— nigriceps 570
—— *nigriceps* 571
—— nitidicollis 572
—— perdita 575
—— similaris 571
—— subnitens 572
—— testacea 572
SCIOPORUS 561
—— ——? 565
—— apicipennis 563
—— *breviceps* 564
—— brunneus 561
—— chontalenus 563

Page

Scioporus fulvescens 562
—— latifrons 564
—— *latifrons* 565
—— obsoletus 563
—— parvidens 564
—— sellatus 562
—— signatus 562
—— *signatus* 563
SCIOTROGUS 707
—— opacus 707
Scopæodera 795
Scopæodes 534
SCOPÆOMERUS 538
Scopæomerus 541
—— chiriquensis 539
—— guatemalenus 539
—— obscurus 540
—— palmatus 539
—— *palmatus* 540
SCOPÆUS 540, 795
Scopæus 538, 539, 548, 549, 552, 556, 557
—— antoniensis 545
—— apicicornis 542
—— apicipennis 547
—— *apicipennis* 548
—— brevipennis 544
—— carissimus 545
—— concolor 542
—— *concolor* 543
—— delicatulus 548
—— discoidalis 546
—— *discoidalis* 547
—— dissimilis 544
—— femoralis 795
—— filitarsis 547
—— filum 542
—— latitarsis 541
—— ligulifer 540
—— mollis 545
—— obscurus 543
—— *ornatus* 545
—— piceolus 543
—— politus 546
—— *politus* 547
—— *pulchellus* 547
—— salvini 543
—— *tarsalis* 541
—— umbra 544
—— vilis 541
Scytalinus 498
SELMA 343
—— modesta 343
Sepidulum 88
—— *costatum* 88
SILUSA 274

Page

Silusa 240, 246, 253, 278
—— gracilis 277
—— hirtella 274
—— *hirtella* 275, 276, 277
—— maura 276
—— opacella 277
—— parvula 278
—— *rubiginosa* 274, 275, 277
—— similis 275
—— subtilis 276
—— vestita 275
SINDOLUS 72
—— mundus 73
—— optatus 72
—— *optatus* 73
Smilax 342
—— *americanus* 342
SOMOLEPTUS 494, 791
Somoleptus 495
—— ænescens 495
—— *ænescens* 496
—— agræformis 498
—— alticola 498
—— bicolor 495, 791
—— *bicolor* 496
—— elegans 498
—— gracilis 496
—— obscurus 496
—— *obscurus* 497
—— obsoletus 496
—— *obsoletus* 497
—— pallipes 497
—— *pallipes* 498
—— parvulus 496
—— punctulatus 497
—— sparsus 497
Sphæridium abdominale 769
—— *mellipes* 105
—— *prætextatum* 107
STAMNODERUS 607
—— championi 607
—— *championi* 608
—— godmani 608
—— gracilis 608
—— optatus 608
—— sallæi 607
STAPHYLINIDÆ 145
STAPHYLININA 370
STAPHYLININÆ 320
STAPHYLINUS 371, 785
Staphylinus 342, 344, 347, 348, 351, 354, 361, 369, 370, 371, 372, 373, 390
—— affinis 379
—— *affinis* 380
—— angusticeps 376

Page
Staphylinus antiquus 385
—— *antiquus*.... 381, 382, 383, 786
—— apicipennis 381
—— atrox 372
—— *atrox* 373, 374, 377
—— belti 387
—— biseriatus 374, 785
—— *buqueti* 372, 373
—— *calidus* 344
—— caliginosus 373
—— *caliginosus* 374, 376
—— *canaliculatus* 213
—— castaneus 377
—— *caudatus* 373
—— centralis 384
—— championi 382
—— chiriquensis 388
—— *connexus* 433
—— consors 382
—— *consors* 383
—— cyanomelas 385
—— *cyanomelas* 387
—— *discoideus* 409
—— discretus 379, 786
—— *ephippiatus* 432, 433
—— extensus 372
—— *fasciatus* 355
—— ferox 372
—— *ferox* 373
—— fervidus 377
—— *fervidus* 378
—— *fetialis* 351
—— *formosus* 431
—— *fulgens* 468
—— fulvomaculatus 373
—— funebris 375
—— fuscomaculatus 378
—— *fuscomaculatus* 379, 380
—— gracilipes 388
—— *gracilipes* 389
—— guatemalenus 386
—— ignotus 381
—— *ignotus* 382
—— incognitus 376
—— *incognitus* 381
—— *infuscatus* 371
—— insolitus 389
—— *lævigatus* 336
—— *laqueatus* 688
—— lupinus 785
—— maculiventris 375
—— *maculiventris* 374
—— maculosus 377
—— marcidus 379
—— *marcidus* 380
—— *maxillosus* 370

Page
Staphylinus medialis 384
—— memnonius 380
—— mendicus 387
—— *mendicus* 390
—— mexicanus 384
—— modestus 383
—— *modestus* 384
—— *mysticus* 373
—— nudicollis 786
—— *ochropygus* 382
—— optatus 386
—— *optatus* 387
—— *ornatus* 353
—— *pardalis* 373
—— phœnicurus 377
—— *pilosus* 342
—— *priscus* 383
—— *puniceipennis* 339
—— *rufipennis* 431
—— *rutilus* 476
—— sallæi 383
—— salvinianus 385
—— *salvinianus* 386
—— *saphyreus* 476
—— *sapphirinus* 344
—— *scutellaris* 373
—— sedatus 785
—— *segmentarius* 355
—— sepulchralis 374
—— *tachiniformis* 425
—— tarsalis 389
—— tempestivus 377
—— *tomentosus* 383, 385
—— *versicolor* 371
—— vestitus 378
—— *villosus* 370
—— vittatus 374
—— *vittatus* 375
—— *vulpinus* 375, 785
—— *xanthopygus* 347, 348
Stenæsthetus 640
STENAGRIA 237
Stenagria 233, 238, 240
—— constricta 239
—— gracilipes 238
—— *gracilipes* 239
—— humeralis 240
—— *humeralis* 238
—— opacula 239
—— paræ 240
—— *paræ* 238
Stenelmis 134
STENINÆ 640
STENUS 640, 798
Stenus 641, 643, 646, 649, 654, 659, 661, 663, 799

Page
Stenus abscondens 798
—— aculeatus 661
—— addendus 654
—— *addendus* 655
—— albipes 664
—— *albipes* 663, 665, 666
—— alticola 652
—— alumnus 654
—— *alumnus* 655
—— ambulator 657
—— *animatus* 799
—— *arizonæ* 642
—— armatus 661
—— asperatus 659
—— bajulus 653
—— *bajulus* 654
—— buccalis 648
—— *buccalis* 647
—— *callosus* 655, 656
—— *cerritus* 667
—— *chalcites* 646
—— championi 642
—— chiriquensis 663
—— chontalenus 666
—— consimilis 651
—— *consimilis* 652, 653
—— *contractus* 656
—— corrosus 645
—— cribriceps 662
—— cylindricollis 664
—— cylindricus 663
—— *cylindricus* 664, 666
—— deceptor 666
—— densipennis 650
—— detector 665
—— docilis 653
—— *docilis* 654, 655
—— eremitus 655, 799
—— exulans 660
—— fauvelianus 646
—— *fauvelianus* 647
—— flohri 666
—— gentilis 657
—— godmani 662, 799
—— *godmani* 663
—— graciliventris 643
—— guatemalenus 665
—— hostilis 643
—— *hostilis* 644
—— idoneus 799
—— inanis 656
—— *inanis* 658
—— incognitus 652
—— inermis 642
—— laceratus 658, 799
—— *laceratus* 659

Page

Stenus lætipes 658
—— leucopus 651
—— *leucopus* 653
—— longiventris 650
—— macilentus 647
—— megops 658
—— mexicanus 644
—— micans 656
—— *micans* 657
—— mucronatus 644
—— *mucronatus* 645
—— nasutus 648
—— nimborum 644
—— *nitidiusculus* 653
—— ornativentris 650
—— peregrinus 656
—— placidus 663
—— podagricus 667
—— *providus* 644
—— *pubescens* 651
—— *punctatus* 653, 654
—— punctiventris 645
—— *reconditus* 651
—— remotus 659
—— renifer 641
—— *renifer* 642
—— repletus 646
—— sagax 665
—— *sagax* 661, 666
—— sallæi 641
—— salvini 659
—— *salvini* 657, 660
—— scabripennis 649
—— *scabripennis* 650
—— scabrosus 648
—— *scabrosus* 649
—— scutiger 660
—— segnis 655
—— sobrinus 647
—— solitarius 647
—— suaveolus 667
—— *sulcipennis* 646
—— *tarsalis* 651
—— trochanterinus 649
—— vestigialis 653
—— zunilensis 645
Stenusa 274
STERCULIA 468
Sterculia 467, 471
—— basalis 469
—— *clavicornis* 471
—— discedens 470
—— *fimetaria* 471
—— *formicaria* 468, 471
—— fulgens 468
—— *fulgens* 469

Page

Sterculia funebris 471
—— humeralis 469
—— mandibularis 468
—— *mandibularis* 469
—— *minor* 471
—— pollens 469
—— puncticeps 470
Sternopriscus 26
Stilicioides 238
STILICOPSIS 606
Stilicopsis 596
—— brevis 607
—— *crassus* 606
—— *modestus* 606
—— *pictus* 606
STILICUS 581
Stilicus 576, 577, 579, 582, 604
—— angularis 581
—— bidens 585
—— *carinatus* 582
—— chiriquensis 584
—— cribratus 582
—— cribripennis 583
—— *cribripennis* 584
—— dissimilis 586
—— femoratus 583
—— *femoratus* 584
—— guatemalenus 582
—— *guatemalenus* 583
—— muticus 585
—— nimborum 583
—— rugicollis 584
—— simplex 584
STILOCHARIS 576
Stilocharis 577
—— longula 577
STILOMEDON 565
Stilomedon 567, 569
—— connexus 566
—— *connexus* 567
—— *convexus* 566
—— strigicollis 566
—— triseriatus 565
—— *triseriatus* 566
—— verticalis 567
Styliderus 589
STYNGETUS 361
Styngetus 354
—— anticus 362
—— championi 362
—— *cupripennis* 362
—— deyrollei 361
—— *deyrollei* 362
—— flavicaudus 361
—— *flavicaudus* 362
—— viduus, var. 361

Page

Sunides 601, 602, 603
—— *boreaphilides* 602
SUNIINA 591
SUNIOCHARIS 586, 796
Suniocharis 565, 567, 587
—— fragilis 587, 796
—— modesta 586
—— *modesta* 587
—— nigrescens 587
SUNIOTRICHUS 587
—— capillaris 588
—— puncticollis 588
—— sordidus 588
SUNIUS 596
Sunius 550, 565, 586, 587, 590, 595, 601, 607, 609
—— *anguinus* 597
—— *attenuatus* 601
—— *bidens* 602
—— *bipunctatus* 602
—— *bispinus* 602
—— *brevis* 607
—— *catena* 602
—— *celatus* 602
—— centralis 599
—— cinctiventris 601
—— cognatus 596
—— *cognatus* 597, 598
—— *confinis* 602
—— *crassus* 606
—— *filiformis* 598
—— filiventris 597
—— *hybridus* 602, 604
—— *insignis* 607
—— *labeo* 607
—— *lateralis* 599, 601
—— *latus* 587
—— *limbatus* 599
—— *lineiventris* 599
—— longinasus 596
—— *longiusculus* 601
—— *modestus* 606
—— *nævius* 602
—— opaculus 600
—— *palpalis* 602, 605
—— *peltatus* 602, 606
—— *pictus* 606
—— pilatei 599
—— *prolixus* 598
—— *pusio* 589
—— sanctus 600
—— signatellus 598
—— *spinifer* 602
—— *stigma* 602
—— substrictus 598
—— subtilis 598

Page

Sunius subtilis 599
—— tenuis 600
—— testaceus 601
—— *troglodytes* 589
—— vilis 597
—— *vilis* 598
SUPHIS 5
—— difformis, var. 5
—— *lineatus* 7

TACHINODERUS 307, 781
—— grandis 308
—— *grandis* 782
—— major 308
—— remotus 781
Tachinomorphus 307
TACHINUS 309, 782
Tachinus 298, 307
—— alticola 310, 782
—— *alticola* 311
—— *depressus* 303
—— *elatus* 305
—— *humilis* 298
—— inornatus 310
—— *inornatus* 311
—— meridionalis 309
—— nimborum 311
—— *ruficornis* 303
—— *rutilus* 304
TACHIONA 284
—— deplanata 284
TACHYPORINÆ 297
TACHYPORUS 311, 782
—— argutus 312
—— *argutus* 782
—— *chrysomelinus* 312
—— mexicanus 311
—— pallescens 312
—— pectoralis 312
—— tarsalis 782
TACHYUSA 225
Tachyusa 174, 227, 287, 497
—— *extranea* 199, 225
—— *mexicana* 228
—— *picticornis* 199, 225
—— seticornis 226
—— sparsa 226
TÆNODEMA 618
—— filiforme 620
—— hæmorrhoidale 619
—— nigripes 619
—— nigripes, var. mexicanum . 619
—— ornatum 619
—— *quadratum* 619
—— stigmaticum 618
—— *stigmaticum* 619

Page

Tænodema tibiale 620
TANYGNATHUS 321
—— antennalis 321
—— *australasiæ* 321
—— crassulus 322
—— muticus 321
—— *terminalis* 321, 322
—— vilis 322
TESBA 475
—— belti 475
Tetratarsus 640
THAMIARÆA 197
Thamiaræa 196, 205
—— cognata 198
—— salvini 197
—— *salvini* 198
—— variegata 198
Thectura 195, 240
THERMONECTES 43, 758
—— —— ? 758
—— basilaris 45
—— cinctatus 45
—— circumscriptus 44
—— *circumscriptus* 45
—— cuneatus 45
—— *depictus* 45, 759
—— maculatus 44
—— margineguttatus 45
—— marmoratus 45
—— nigro-fasciatus 44
—— ornaticollis 44
—— succinctus 44, 758
Thermonectus 43
THINOBIINA 705
THINOBIUS 705
Thinobius 707
—— agilis 706
—— *brachypterus* 707
—— curtellus 706
—— *longipennis* 705
—— nigricans 706
—— tenuis 705
—— thripsoides 705
Thinodromus 702
THINOPHILUS 706
—— dissimilis 707
THORACOPHORUS 725
Thoracophorus 723
—— æqualis 727
—— brevicristatus 726
—— discretus 727
—— *excisicollis* 725
—— filum 728
—— *opacus* 723
—— pallidus 728
—— pusillus 727

Page

Thoracophorus pusillus 728
—— ruficollis 727
—— sallæi 725
—— truquii 726
Thoraxophorus 725
THYREOCEPHALUS 498
Thyreocephalus 499
—— cribripennis 501
—— cyanipennis 500
—— lynceus 499
—— puncticeps 501
—— rufipennis 500
—— *rufipennis* 501
—— salvini 499
—— *salvini* 500
—— subtilis 499
—— unicolor 500
TINOTUS 170, 778
—— cavicollis 170
—— *cavicollis* 171
—— flavescens 171, 778
Triga 704
Trigonophorus 363
Trigonopselaphus 363
—— *opacipennis* 369
—— *venustus* 364
—— *violaceus* 364
TROCHODERUS 580, 796
—— dubius 581
—— godmani 581
—— ovaticeps 796
TROGACTUS 702
—— championi 703
—— elegans 703
—— funebris 703
—— godmani 703
Troginus 700
TROGOPHLŒUS 697, 801
Trogophlœus 243, 698, 700, 701, 702, 704, 707
—— argutus 801
—— *aridus* 698
—— centralis 701
—— *corticinus* 698
—— *croceipes* 702
—— curtulus 699
—— excellens 699
—— *exiguus* 700
—— filarius 698
—— *fulvipennis* 699
—— fulvipes 697
—— insignellus 700
—— misellus 700
—— *misellus* 701
—— mollis 702
—— nigrellus 699

Page

Trogophlœus nigrellus 700
—— planellus 698
—— punctipennis..... 701
—— *riparius*..... 698
—— *scrobiculatus*..... 701
—— suffusus..... 698
—— triangulum 701
—— velutinus 700
—— vittatus..... 702
Trogus 47
—— *flavocinctus* 47
TROPISTERNUS 54, 762
Tropisternus 763
—— apicipalpis..... 55
—— brevicollis..... 56
—— *californicus* 59
—— chalybeus 55
—— chontalensis 57
—— collaris 55
—— *collaris* 763
—— concolor 57
—— *concolor*..... 58
—— crassus 56
—— dorsalis..... 763
—— *dubius* 59
—— flavipalpis..... 763
—— fuscitarsis..... 58
—— *fuscitarsis* 59
—— lateralis..... 60
—— *limbalis* 60
—— mexicanus 55, 762
—— nitens 56, 763
—— *nitidulus* 57
—— *nitidus* 56
—— obscurus 60
—— *obscurus* 61, 763
—— oculatus 58
—— ovalis..... 57
—— *signatipes* 59
—— sublævis 763
—— tinctus 59
—— *tinctus* 61
—— xanthopus 59, 763
Turellus..... 640
TYMPANOPHORUS..... 342, 784
—— concolor..... 343, 784
—— puncticollis 343

Page

Volvulus 65, 77, 78, 79

XANTHOLININA 466
XANTHOLINUS 475, 791
Xantholinus 145, 476, 486, 487, 490, 498, 502
—— æneotinctus 484
—— *æneotinctus* 485
—— alticola 481
—— *attenuatus* 484
—— brachypterus..... 479
—— *canaliculatus*..... 472
—— carinatus 480
—— *carinatus* 478
—— chalybeus 476
—— championi..... 482
—— crassiceps..... 484
—— *crassiceps* 490
—— difficilis 482, 791
—— discretus 481
—— *divisus* 474
—— *erythropygus*..... 488
—— flagellifer 485
—— *flavipennis*..... 473
—— fuliginosus 478
—— fumatus..... 480
—— *fumatus*..... 481, 502
—— guatemalenus 485
—— humilis 481
—— *humilis* 482
—— *impressifrons* 487
—— lacertosus 478
—— lævipennis 477
—— laxus 482
—— *laxus* 483, 490
—— *lorquini* 499
—— *lynceus* 499
—— mexicanus 479
—— *mexicanus*..... 480
—— nigriceps 476
—— oculatus 477
—— panamensis 485
—— *pectoralis* 477
—— *puncticeps*..... 475
—— *punctulatus* 480
—— *pygialis* 487

Page

Xantholinus resectus 480, 791
—— *resectus* 502
—— rudis 477
—— *rudis* 478
—— rutilus 476
—— salvini 483
—— serpens 479
—— strigiceps 476
—— *temporalis* 487
—— vilis 483
—— *vilis* 482, 490
XANTHOPYGINA 342
Xanthopygina 783
XANTHOPYGUS 344
Xanthopygus 346, 347, 368
—— *abdominalis* 347
—— *calidus* 345
—— *cognatus*, var. *minor* 347
—— *faustus* 346
—— flohri..... 345
—— morosus..... 346
—— puncticollis 345
—— rufipennis 346
—— sapphirinus 344
—— *sapphirinus* 345
—— solskyi 344
—— *solskyi* 345
—— *violaceus* 345
—— viridipennis 344
—— *viridipennis* 345
—— *xanthopygus* 344

ZIROPHORUS 711
Zirophorus 712
—— bicornis..... 712
—— bicornis, var. oxytelinus.. 712
—— *fronticornis* 711, 712
—— furcatus..... 712
—— *lacordairei*..... 712
—— *penicillatus* 711
—— planatus 711
—— *spinosus*..... 711
ZONASTER 595
—— optatus 595
Zyras 202, 207

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1



2



3



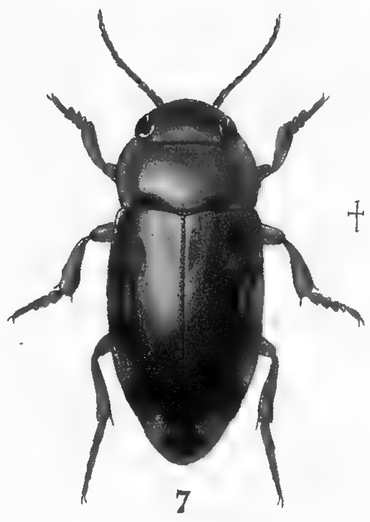
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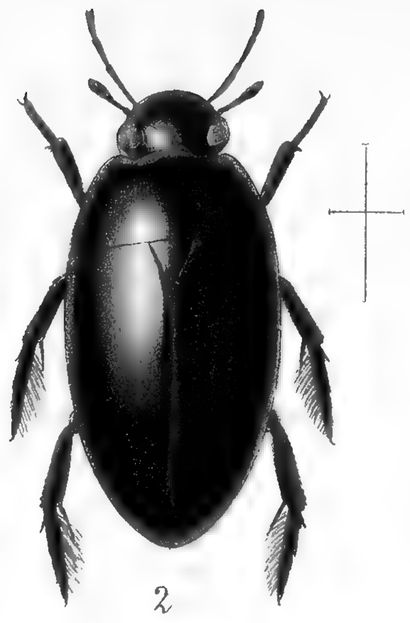
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13 MEGADYTES FALLAX.
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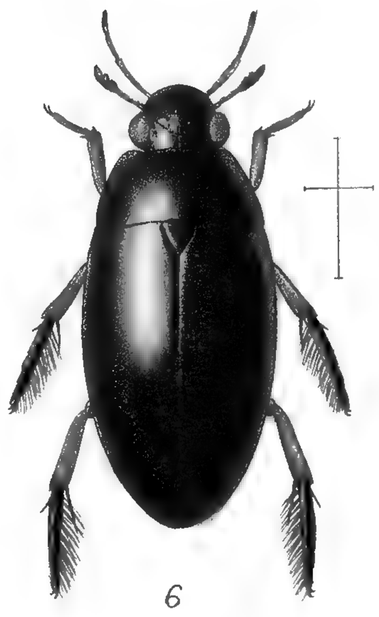

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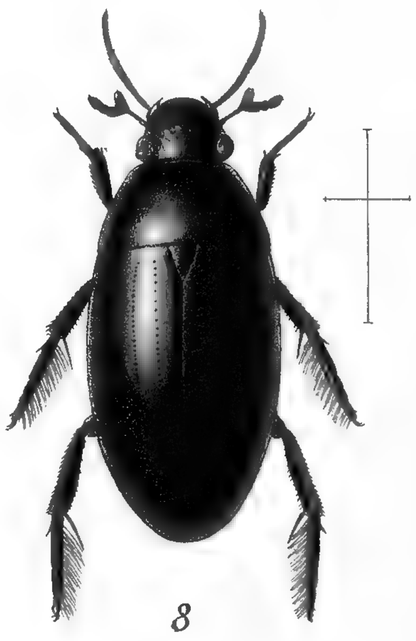

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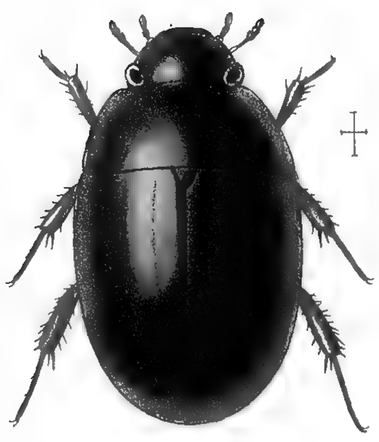

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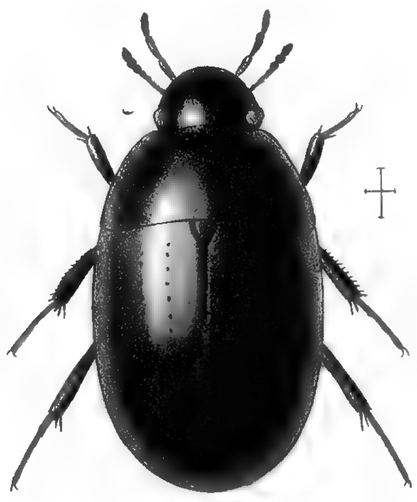

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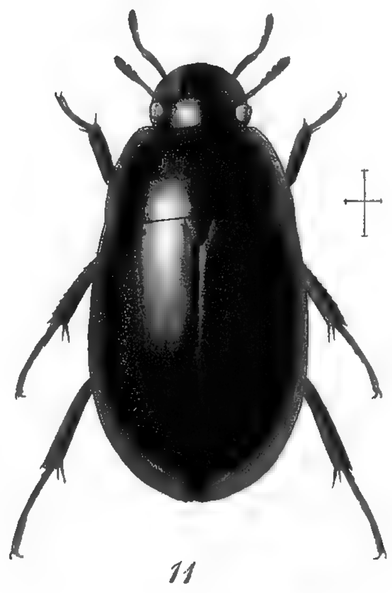

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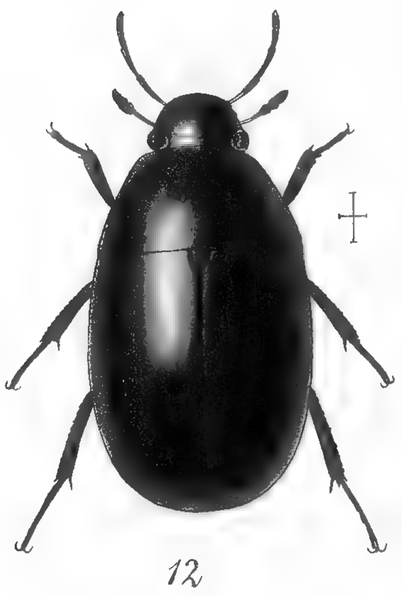

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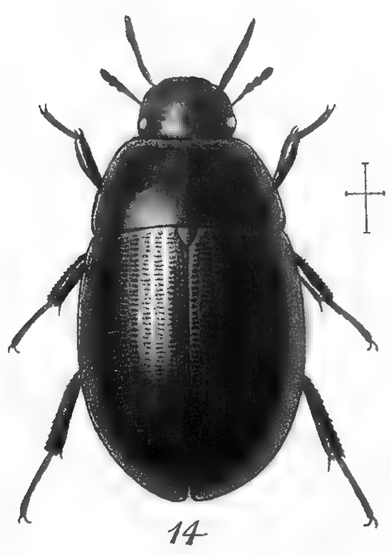

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1 HYDROPHILUS INSULARIS.
2 TROPISTERNUS APICIPALPIS.
3 " MEXICANUS.
4 " BREVICOLLIS.
5 " OVALIS.
6. TROPISTERNUS OCULATUS.
7 " OBSCURUS.
8 HYDROCHARIS PERFECTUS.
9 OOCYCLUS BREVICORNIS.
10 HYDROCOMBUS POLITUS.
11 PHILYDRUS MEXICANUS.
12 SINDOLUS OPTATUS.
13 CHASMOGENUS FRAGILIS.
14 HELOCHARES CHAMPIONI.
15 HELOPELTIS LARVALIS.
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Inches 1 2 3 4 5 6 7 8
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1 BEROSUS SALVINI.
2 HEMIOSUS MACULATUS.
3 EPIMETOPUS COSTATUS.
4 OCTHEBIUS CRASSIPES.
5 HYDRÆNA LONGICOLLIS.

6 HYDRÆNA BREVIS.
7 CYCLONOTUM GROSSULUM.
8 PHÆNONOTUM TARSALE.
9 „ ROTUNDULUM.
10 CYCLOTYPUS GODMANI.
11 PEROCHTHES GLOBULUS.

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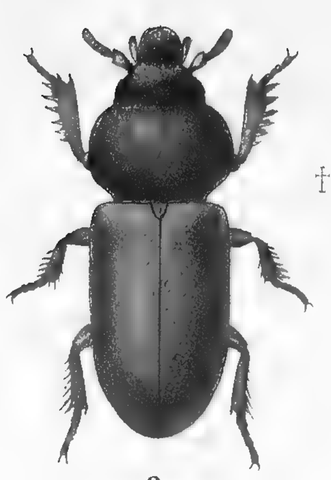
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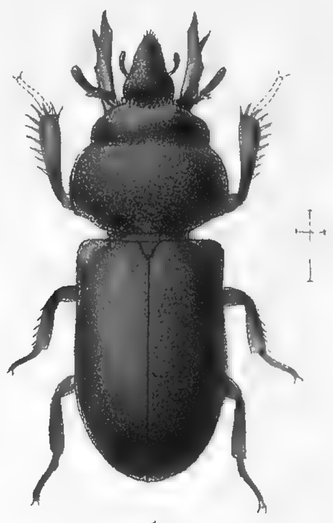
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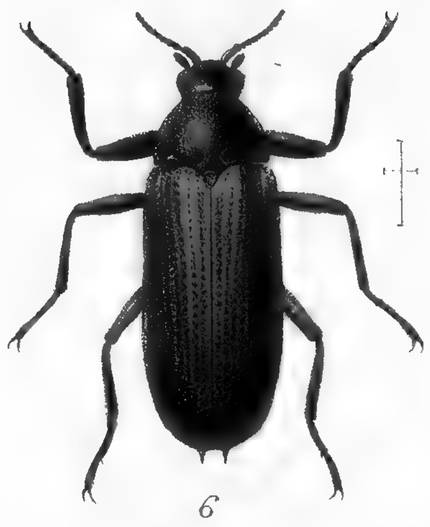

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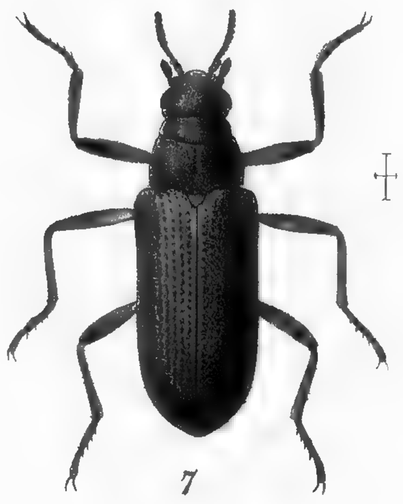

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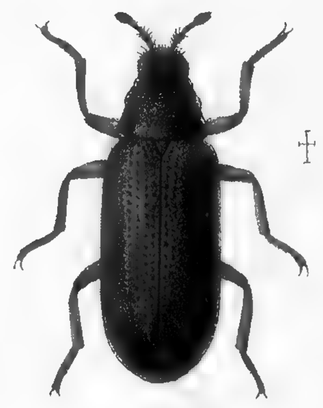

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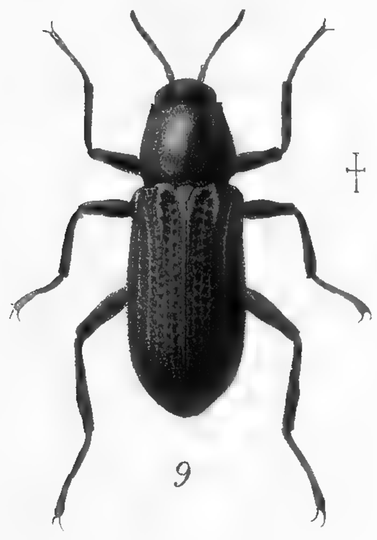

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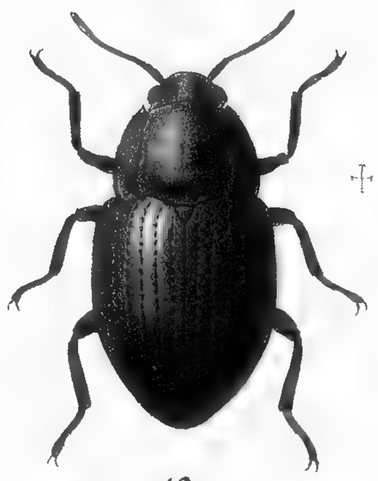

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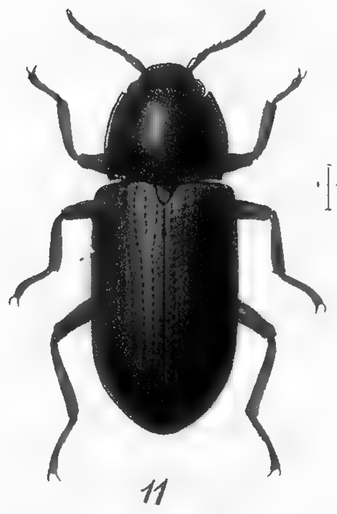

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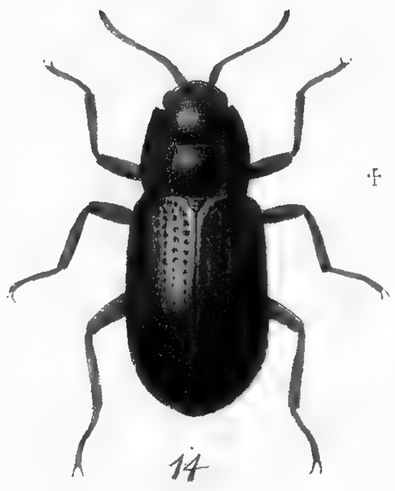

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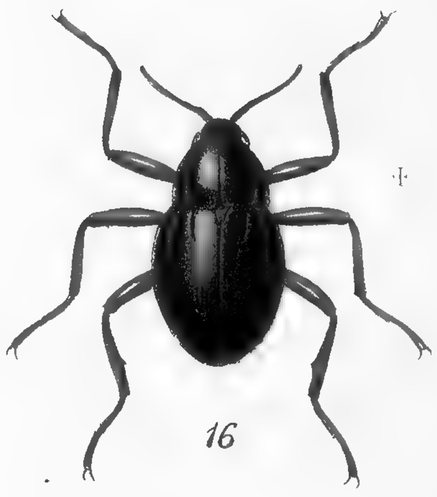

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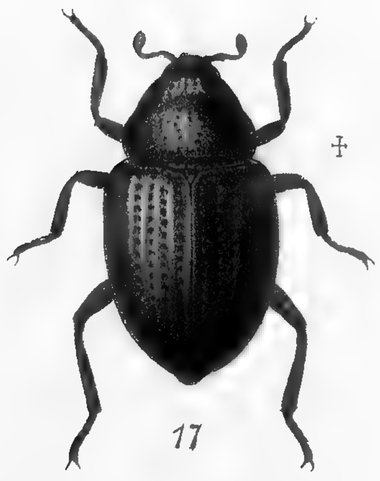

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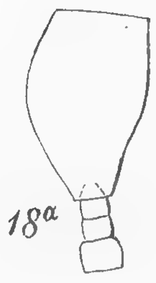

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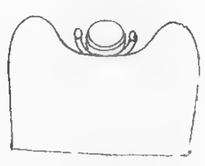

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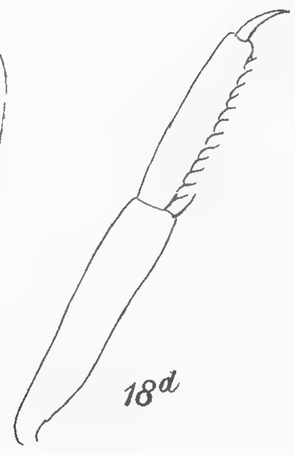

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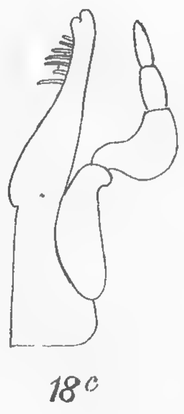

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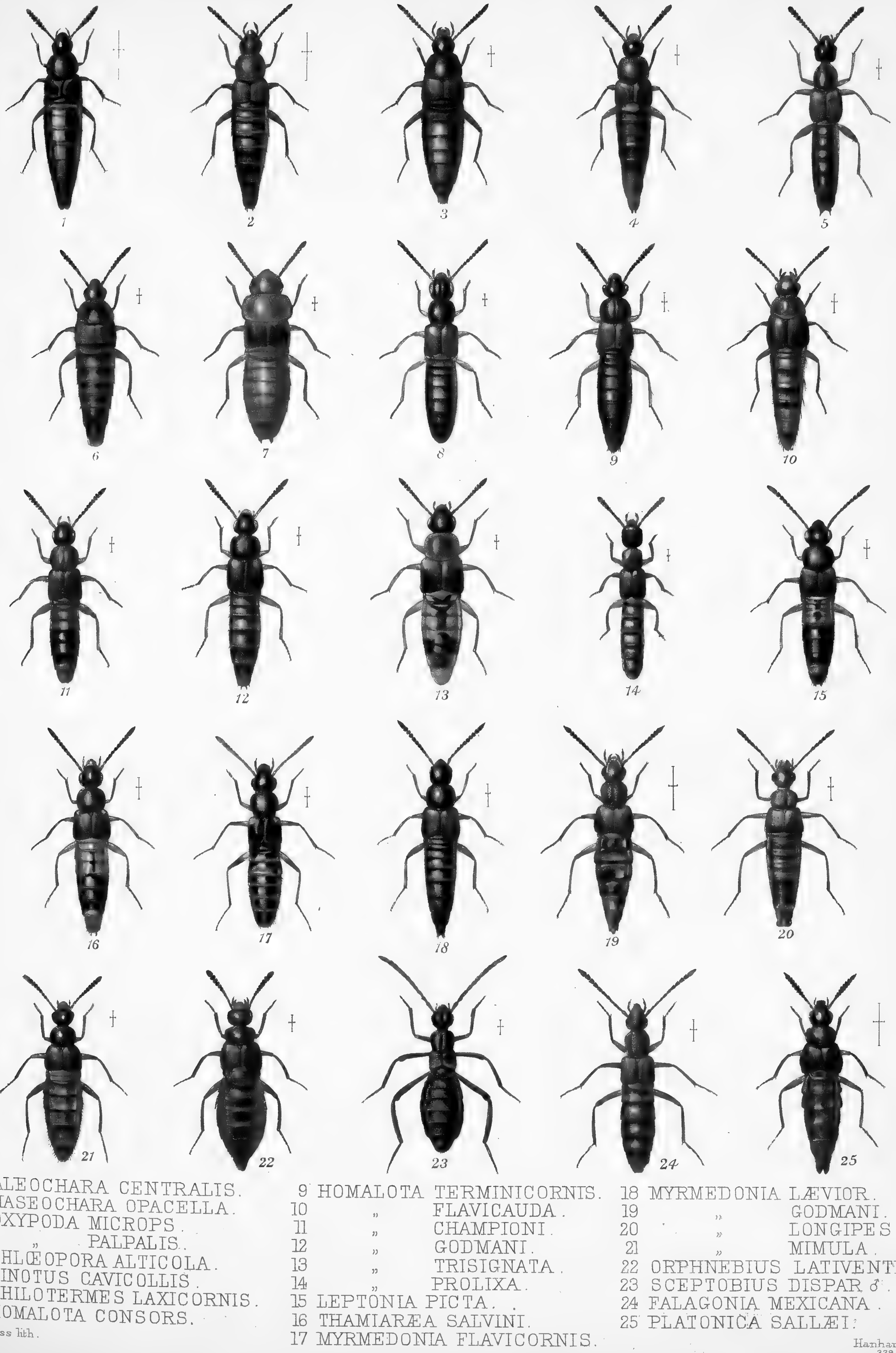

18

1 MEGASTERNUM STRIGICOLLE.
2 DELTOSTETHUS SULCATUS.
3 HETEROCERUS DEBILIS.
4 " ARMATUS. ♂.
5 DRYOPS ELMOIDES.
6 DISERSUS LONGIPENNIS ♂.
7. HEXANCHORUS GRACILIPES ♂
8 PHANOCERUS CLAVICORNIS.
9 CYLLŒPUS OPTATUS.
10 HETERELMIS OBESUS.
11 ELSIANUS ROBUSTUS.
12 ELMIS CHAMPIONI.
13 ELMIS HETEROCERUS
14 " APICALIS.
15 " NODIPES.
16 " SULCICOLLIS.
17 GEORISSUS MINOR.
18 CYATHOCERUS HORNI.

W. Purkiss lith.

Hanhart imp
315.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 ALEOCHARA CENTRALIS.
2 MASEOCHARA OPACELLA.
3 OXYPODA MICROPS.
4 „ PALPALIS.
5 PHLŒOPORA ALTICOLA.
6 TINOTUS CAVICOLLIS.
7 PHILOTERMES LAXICORNIS.
8 HOMALOTA CONSORS.

W.Purkiss lith.

9 HOMALOTA TERMINICORNIS.
10 „ FLAVICAUDA.
11 „ CHAMPIONI.
12 „ GODMANI.
13 „ TRISIGNATA.
14 „ PROLIXA.
15 LEPTONIA PICTA.
16 THAMIARÆA SALVINI.
17 MYRMEDONIA FLAVICORNIS.

18 MYRMEDONIA LÆVIOR.
19 „ GODMANI.
20 „ LONGIPES.
21 „ MIMULA.
22 ORPHNEBIUS LATIVENTRIS.
23 SCEPTOBIUS DISPAR ♂.
24 FALAGONIA MEXICANA.
25 PLATONICA SALLÆI.

Hanhart imp
329.

Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black


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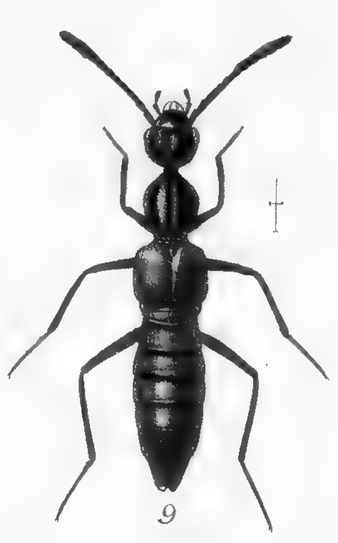

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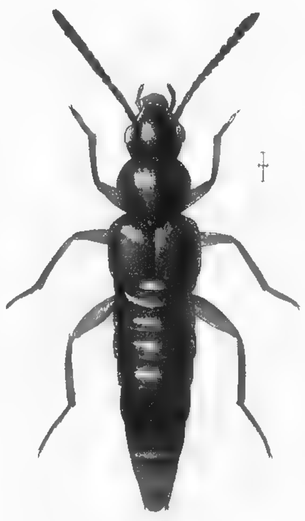

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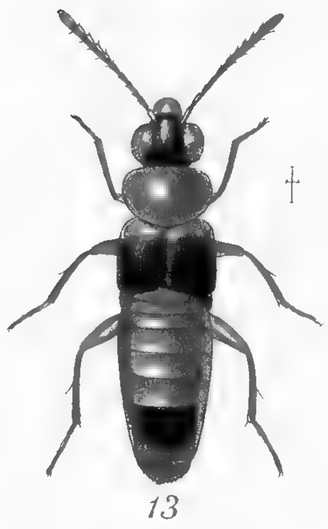

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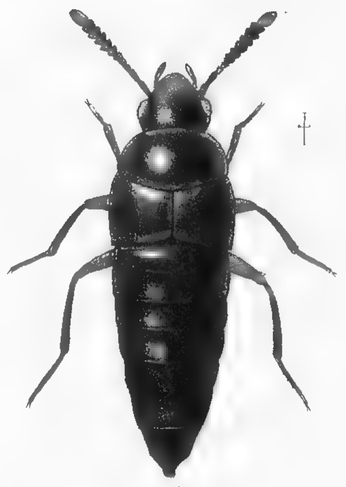

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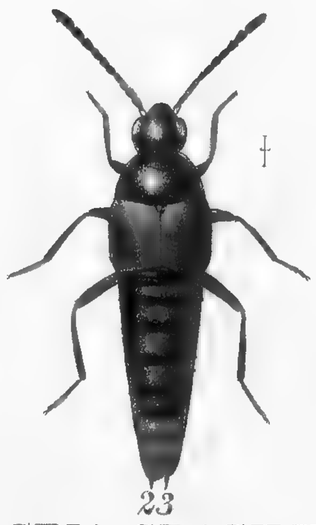

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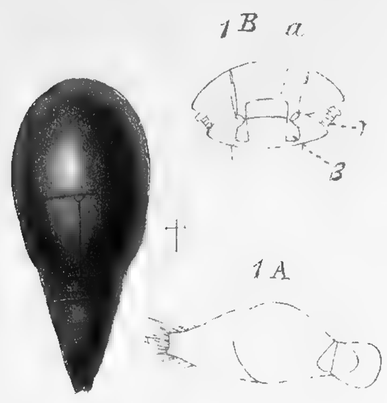

25

1 PLATONICA LATIFRONS.
2 HOPLANDRIA GEMINA.
3 „ RUFA.
4 CHAROXUS FODIENS.
5 RECHOTA IMPRESSA.
6 MERONA FRAGILIS.
7 NEOLARA CENTRALIS.
8 CHITALIA GRANIGERA.
9 STENAGRIA GRACILIPES.
10 „ PARÆ.
11 EPIPEDA RUFA.
12 „ REYI.
13 GYROPHÆNA GRACILICORNIS.
14 BRACHYCHARA CRASSA.
15 PLACUSA LONGICORNIS.
16 „ CRASSULA.
17 SILUSA OPACELLA.
18 SILUSA GRACILIS.
19 EUVIRA GODMANI.
20 GANSIA BICOLOR.
21 TACHIONA DEPLANATA.
22 BAMONA GRACILIS.
23 SAPHOGLOSSA PICTIPENNIS.
24 BARYCHARA FILICORNIS.
25 DEINOPSIS FERRUGINEA.

W.Purkiss lith

Hanhart imp.
328.

Centimeters
Inches
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black



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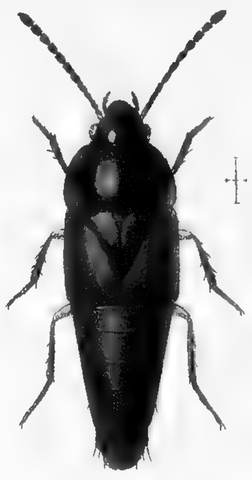
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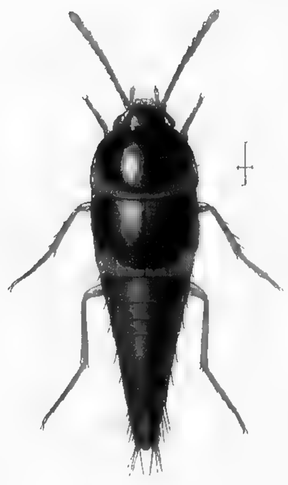
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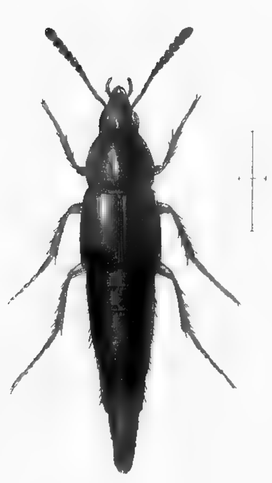
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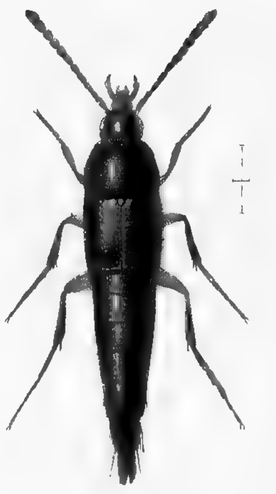
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1 CEPHALOPLECTUS GODMANI.
2 ERCHOMUS POLITULUS.
3 „ DISTANS.
4 „ TACHYPORINUS.
5 „ GLABRIPENNIS.
6 „ SINUATUS.
7 „ IGNAVUS.
8 „ GRAVIDUS.

9 TACHINODERUS GRANDIS.
10 TACHINUS MERIDIONALIS.
11 „ INORNATUS.
12 TACHYPORUS MEXICANUS.
13 „ ARGUTUS.
14 CONOSOMA GRAVIDUM.
15 „ ORNATUM.
16 BOLITOBIUS FESTIVUS.
17 „ OBLIQUUS.

18 MEGACRONUS NIGERRIMUS.
19 „ MERIDIONALIS. *Var*
20 MYCETOPORUS COXALIS.
21 TANYGNATHUS ANTENNALIS.
22 „ VILIS.
23 HETEROTHOPS REMOTA.
24 „ ORBICULARIS.
25 ACYLOPHORUS DIDYMUS.

W. Purkiss lith.

Hanhart imp
344.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19



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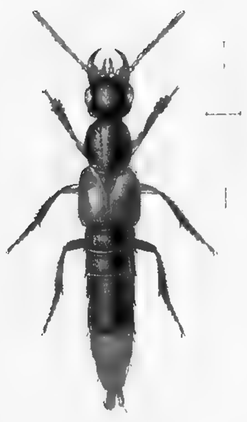
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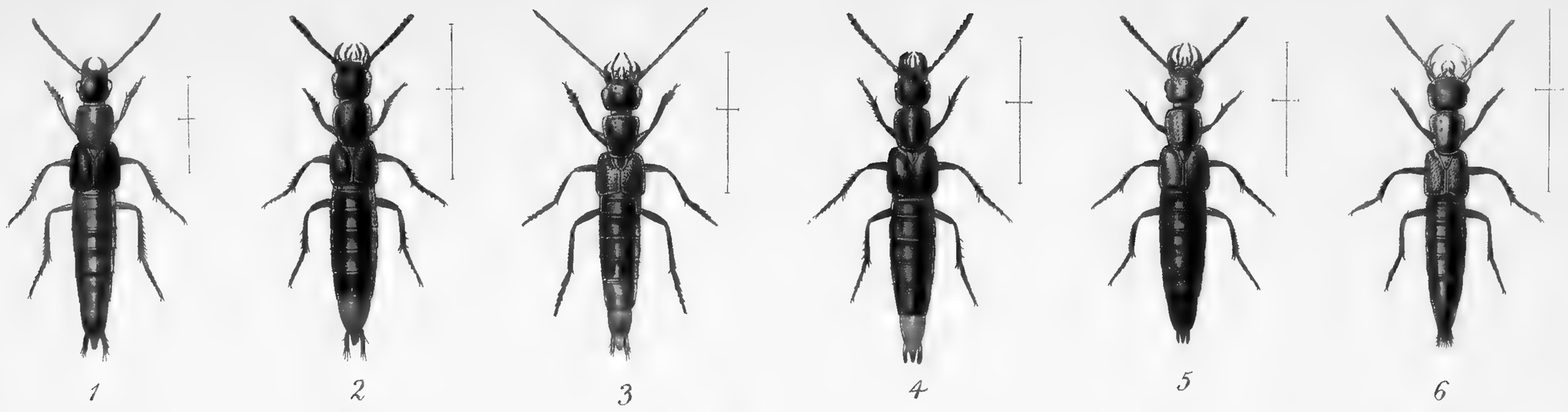
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1. ACYLOPHORUS PALPALIS.
2 MIMOSTICUS VIRIDIPENNIS.
3 QUEDIUS LÆTICULUS.
4 „ CHAMPIONI.
5 „ BASIVENTRIS.
6 „ JOCOSUS.
7 „ ARROGANS.
8 QUEDIONUCHUS NIGERRIMUS.
9 QUEDIOMACRUS PUNICEIPENNIS.
10 CYRTOTHORAX CYANESCENS.
11 „ SALVINI.
12 CORDYLASPIS PILOSA *Var.*
13 TYMPANOPHORUS CONCOLOR.
14 SELMA MODESTA.
15 XANTHOPYGUS PUNCTICOLLIS.
16 „ RUFIPENNIS.
17 LAMPROPYGUS COGNATUS.
18 LAMPROPYGUS ANALIS.
19 BRACHYDIRUS DIVISUS.
20 „ FUNGICOLA.
21 PLOCIOPTERUS COLLARIS.
22 „ VARIEGATUS.
23 PHILOTHALPUS DIFFICILIS.
24 „ PROLIXUS.
25 „ PHILONTHIFORMIS.

W.Purkiss lith.

Hanhart imp.
356.

Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black



1 PHILOTHALPUS PÆDERIFORMIS.
2 GASTRISUS OPACULUS.
3 ISANOPUS SALLÆI.
4 STYNGETUS VIDUUS. *Var*
5 „ ANTICUS.
6 OCYOLINUS AMETHYSTINUS.
7 PHANOLINUS FLOHRI.
8 „ GODMANI.
9 „ SPECIOSUS.

10 PHANOLINUS DISCEDENS.
11 NAUSICOTUS SPECTABILIS.
12 GLENUS FLOHRI *Var.*
13, 13*a* STAPHYLINUS FULVOMACULATUS.
14 „ FEROX.
15 „ ATROX.
16 „ VITTATUS.
17 „ MACULIVENTRIS.
18 „ ANGUSTICEPS.

19 STAPHYLINUS FERVIDUS.
20 „ CHAMPIONI.
21 „ MODESTUS.
22 „ SALVINIANUS.
23 „ BELTI.
24 „ GRACILIPES.
25 „ INSOLITUS.
26 AMICHORUS FAUVELI.
27 FLOHRIA LATICORNIS

W Purkiss lith. Hanhart imp. 357.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 2 3 4 5



6 7 8 9 10



11 12 13 14 15



16 17 18 19 20



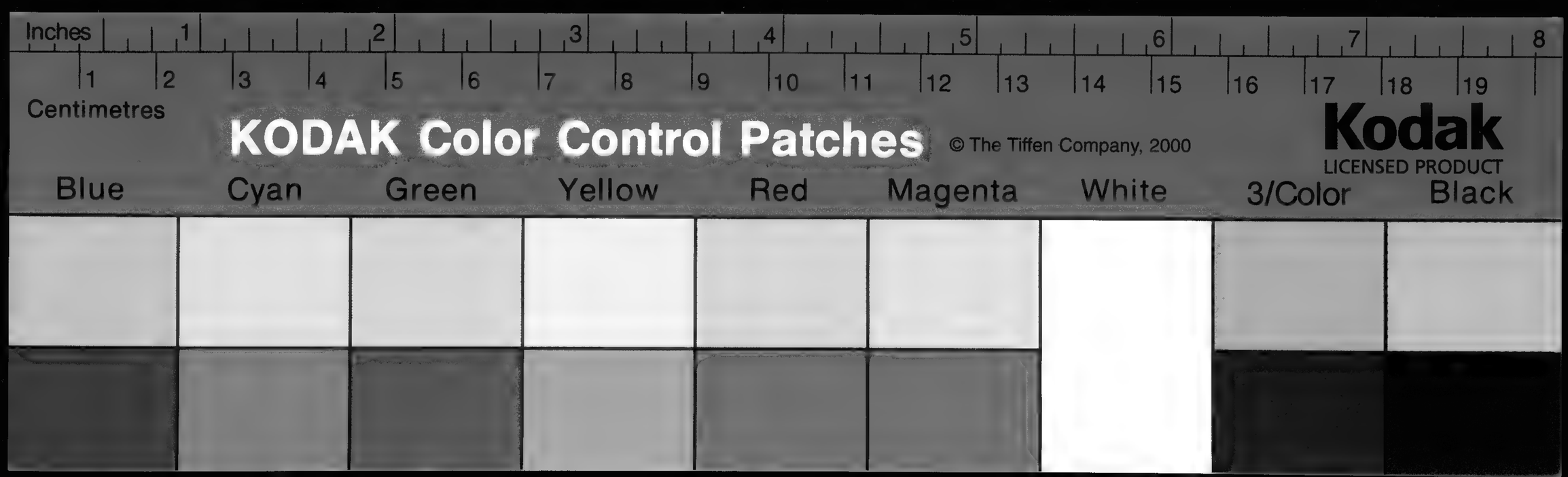
21 22 23 24 25

1 ONTHOSTYGNUS FASCIATUS.
2 MISANTLIUS OPTATUS.
3 „ CARINULATUS.
4 PHILONTHUS PALMATUS.
5 „ SALLÆI.
6 „ HÖGEI.
7 „ ALTICOLA.
8 „ PICEATUS, *Var.*
9 PHILONTHUS PICEATUS, *Var.*
10 „ „ *Var.*
11 „ IRIS.
12 „ ATRICEPS.
13 „ OCHROMERUS.
14 „ PARVIMANUS.
15 „ MOLLIS.
16 „ QUADRATICOLLIS.
17 „ LÆTIPENNIS.
18 PHILONTHUS FULGIPENNIS
19 „ RUFOPYGUS.
20 „ GODMANI.
21 „ SERPENS.
22 „ TACHINIFORMIS.
23 „ RECTILATERUS.
24 „ DISCRETUS.
25 „ CHAMPIONI.

W. Purkiss lith.

Hanhart imp
384.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 PHILONTHUS CRASSULUS.
2 " ABNORMALIS.
3 " PLATYPTERUS.
4 " INFIMUS.
5 " LATECINCTUS.
6 " TROCHANTERINUS.
7 " ALTERNANS.
8 CHROAPTOMUS REGALIS.

9 BELONUCHUS COGNATUS.
10 " ALTERNATUS.
11 " BIDENS
12 " DEJECTUS.
13 " ERYTHROPTERUS.
14 " MIMETICUS.
15 " SIMILIS.
16 PEDEROMIMUS PECTORALIS.
17 " GENTILIS.

18 PEDEROMIMUS SALVINI.
19 " HILARIS.
20 " NOBILIS.
21 " INSOLITUS.
22 " NIGRIPENNIS.
23 " DIFFORMICERS.
24 " CRIBRICOLLIS.
25 " CORROSUS.

W. Purkiss lith.

Hanhart imp
390

Staphylinæ. Pl. IX. p. 271.

Biol. Centr.-Am.



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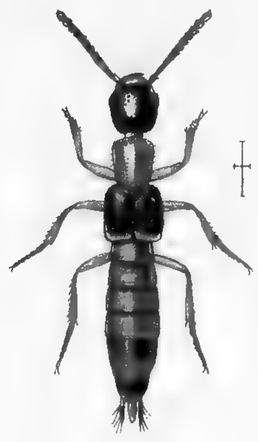
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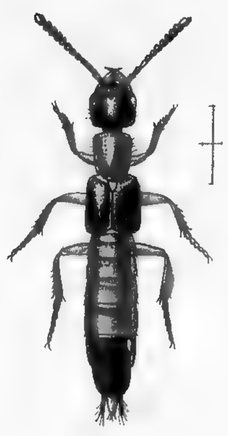
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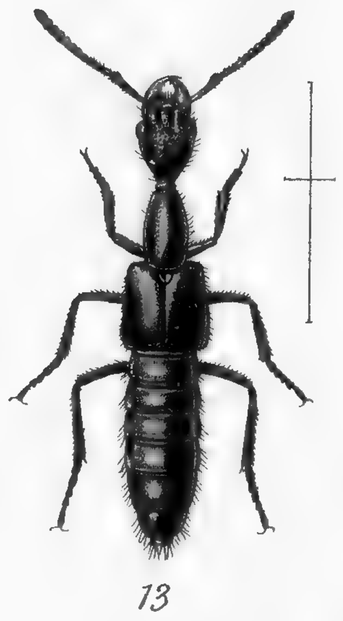
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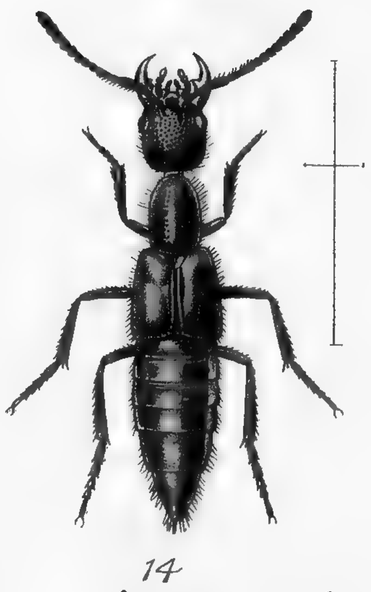
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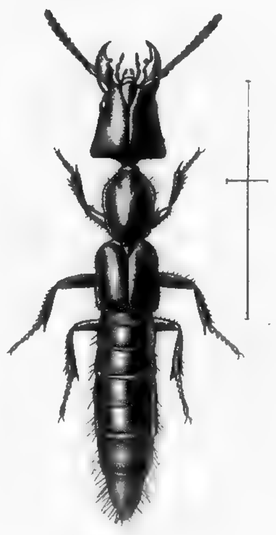
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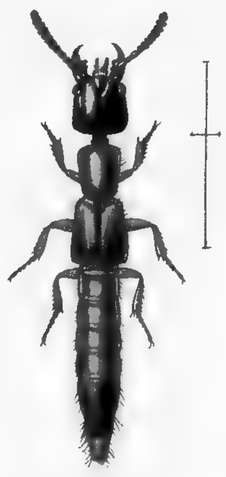
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1 PÆDERALLUS FRAGILIS.
2 LINODERUS GRACILIPES.
3 PESCOLINUS PALMATUS.
4 ODONTOLINUS FASCIATUS.
5 MUSICODERUS CEPHALOTES.
6 ACTOBIUS NITIDULUS.
7 " DELICATULUS.
8 " ALTERNANS.

9 HOLISUS PROLIXUS.
10 " OBLITUS.
11 " ELATUS.
12 DIOCHUS INORNATUS.
13 AGRODES LONGICORNIS.
14 STERCULIA HUMERALIS.
15 PLOCHIONOCERUS BRACHYPTERUS.
16 TESBA BELTI.
17 HOMALOLINUS CANALICULATUS.

18 HOMALOLINUS APICALIS.
19 HETEROLINUS PUNCTICEPS.
20 XANTHOLINUS NIGRICEPS.
21 " RUDIS.
22 " HUMILIS.
23 " ÆNEOTINCTUS.
24 ALLOTRICHUS ARENARIUS.
25 NUDOBIUS CELATUS.

W. Purkiss lith.
Hanhart imp
396.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19



1 HYMENEUS GODMANI.
2 „ CEPHALOTES.
3 THYREOCEPHALUS SALVINI.
4 „ RUFIPENNIS.
5 LEPTACINUS GRANDICEPS.
6 LITHOCHARODES FUSCIPENNIS.
7 SOMOLEPTUS AGRÆFORMIS.
8 „ ÆNESCENS.
9 METOPONCUS VARIANS.
10 „ LONGICEPS.
11 „ HOLISOIDES.
12 CRYPTOBIUM COLLARE.
13 „ SPECULATOR.
14 „ MIXTUM.
15 „ ÆQUALE.
16 „ NASUTUM.
17 „ BREVIPENNE.
18 CRYPTOBIUM DUCALE.
19 „ GRANDE.
20 „ CENTRALE.
21 „ NIGRIVENTRE.
22 „ ROSTRATUM.
23 ABABACTUS DEPRESSUS.
24 „ GRACILIS.
25 „ POLITUS.

W. Purkiss lith.

Hanhart imp.
388.

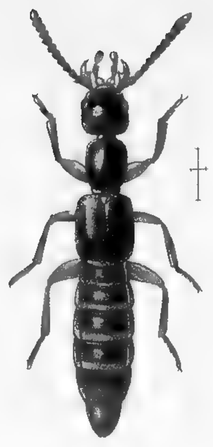
KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19



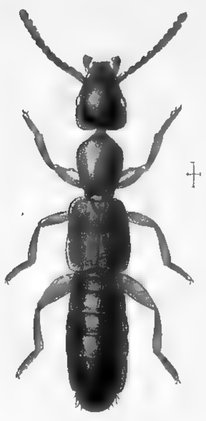
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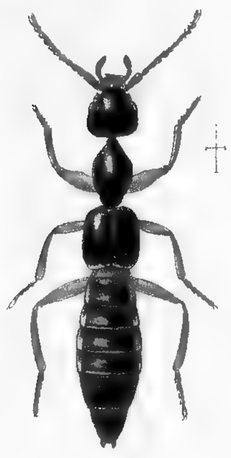
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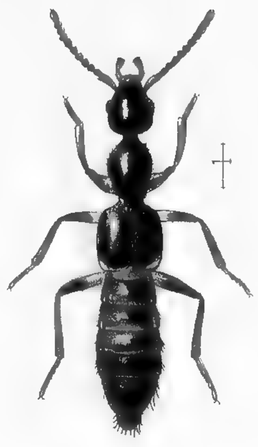
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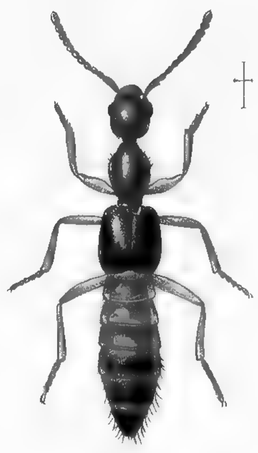
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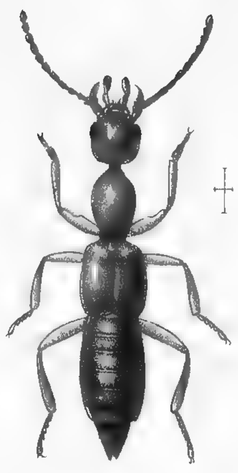
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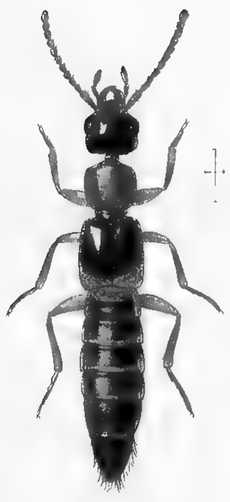
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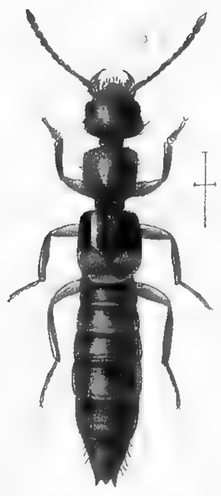
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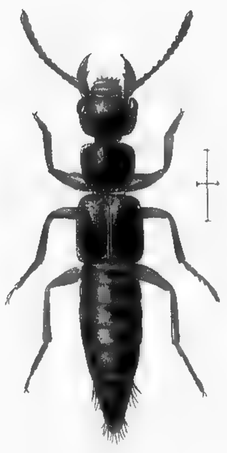
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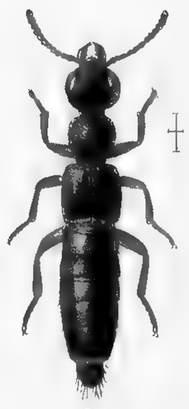
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23



24



25

1 LATHROBIUM MEXICANUM.
2 SCOPÆOMERUS CHIRIQUENSIS.
3 ORUS GUATEMALENUS.
4 SCOPÆUS SALVINI.
5 „ DISSIMILIS.
6 „ ANTONIENSIS.
7 „ APICIPENNIS.
8 „ POLITUS.

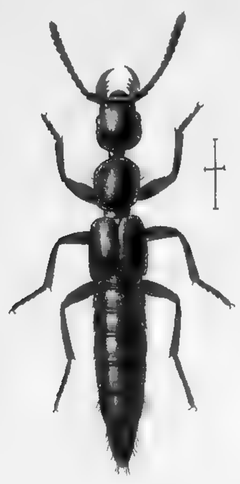
W Purkiss lith.

9 EUSCOPÆUS GRACILICORNIS.
10 ADEROCHARIS LATRO.
11 LITHOCHARIS HILARIS.
12 DACNOCHILUS LÆTUS.
13 ACALOPHÆNA ANGULARIS.
14 LITHOCAON SPARSUS.
15 NEOMEDON PRINCEPS.
16 MESPALERUS FLAVIPENNIS.
17 SCIOPORUS FULVESCENS.

18 SCIOPORUS SIGNATUS.
19 „ LATIFRONS.
20 STILOMEDON TRISERIATUS.
21 OPHIOMEDON STIPES.
22 MONOCHARIS VESTITA.
23 SCIOCHARIS ARRIBALZAGÆ.
24 „ BOOPS.
25 EUSCLERUS RUGIFRONS.

Hanhart imp

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black



1



2



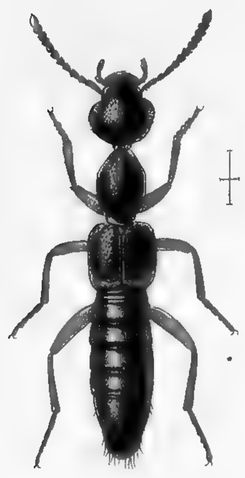
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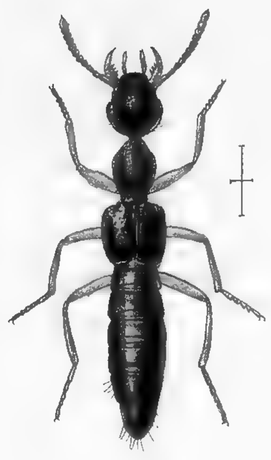
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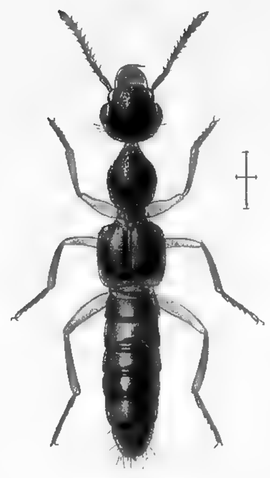
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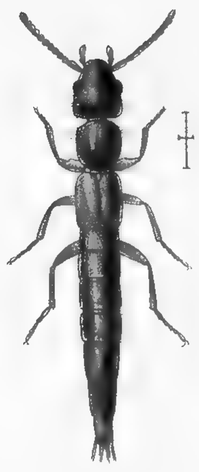
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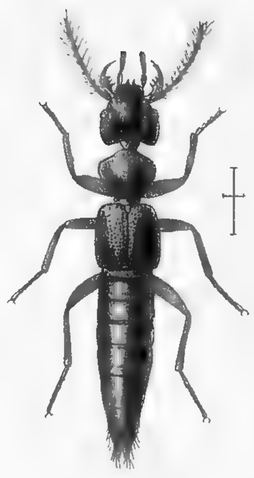
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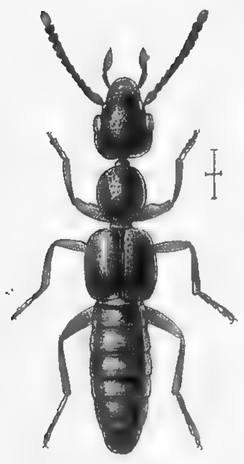
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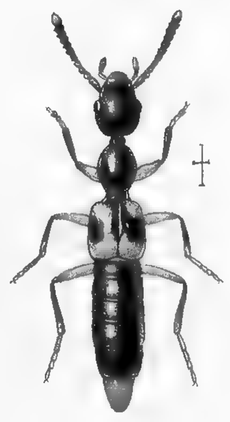
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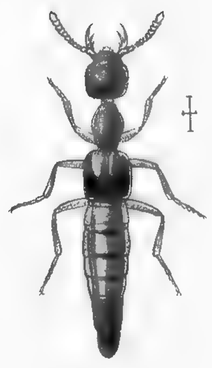
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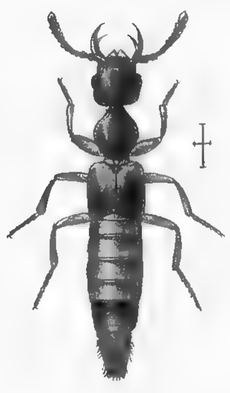
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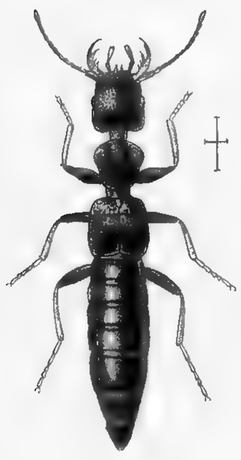
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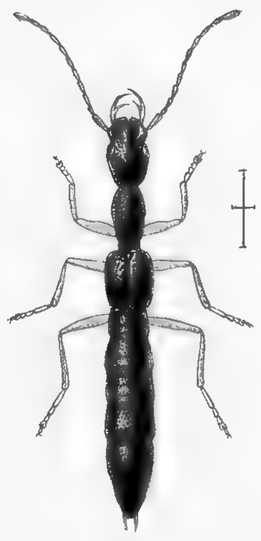
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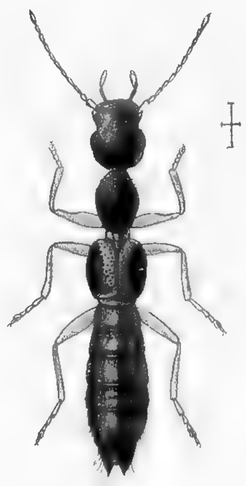
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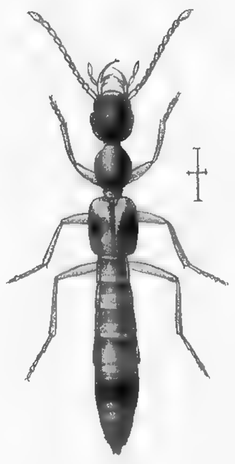
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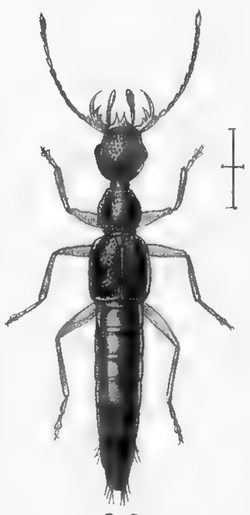
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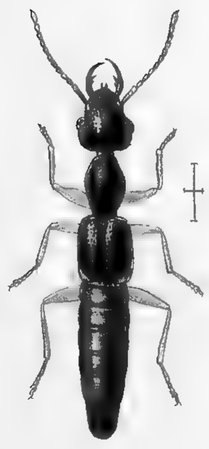
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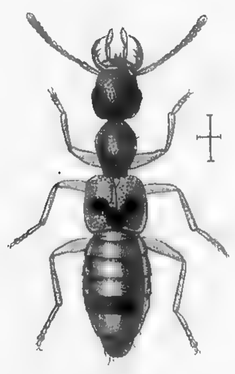
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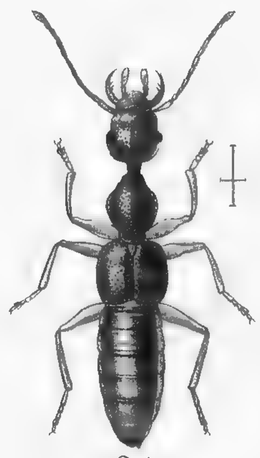
21



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23



24



25

1 STILOCHARIS LONGULA.
2 DERODERUS VESTITUS.
3 „ DIFFICILIS.
4 EUSTILICUS CRASSIDENS.
5 TROCHODERUS GODMANI.
6 STILICUS ANGULARIS.
7 „ CRIBRATUS.
8 „ MUTICUS.

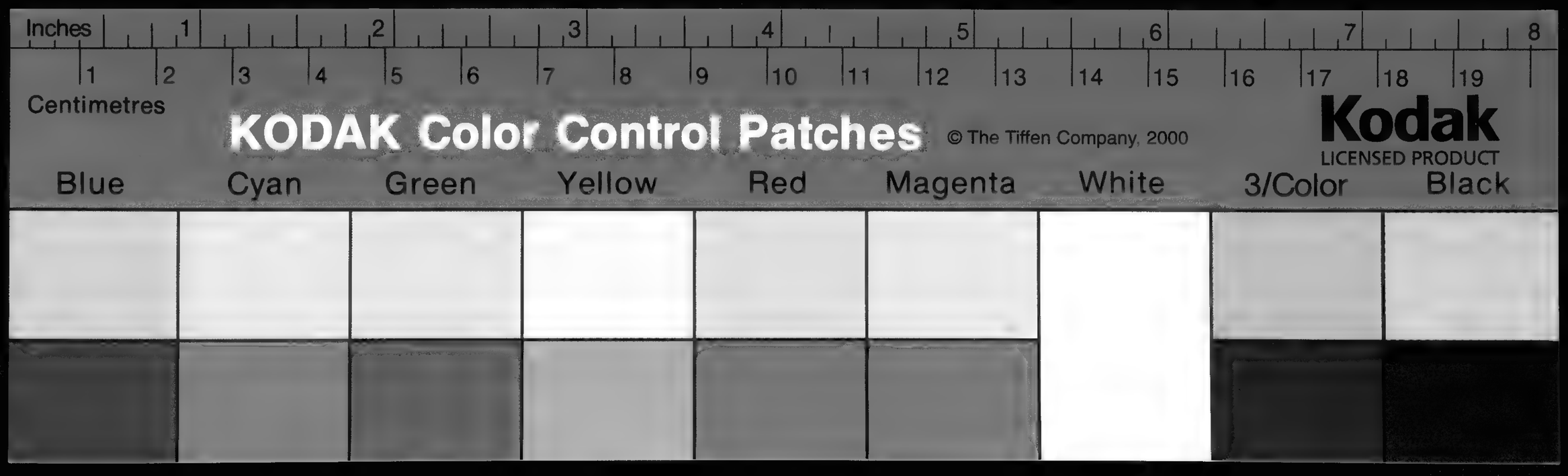
W.Purkiss lith.

9 SUNIOCHARIS MODESTA
10 SUNIOTRICHUS CAPILLARIS.
11 MONISTA CONCOLOR.
12 „ PICTURATA.
13 ECHIASTER FILUM.
14 „ CHAMPIONI.
15 „ LATIVENTRIS.
16 ZONASTER OPTATUS.
17 SUNIUS LONGINASUS.

18 SUNIUS PILATEI.
19 „ TENUIS.
20 DIBELONETES BIPLAGIATUS.
21 „ LATICEPS.
22 „ TRISTIGMA.
23 STILICOPSIS BREVIS.
24 STAMNODERUS CHAMPIONI.
25 „ GODMANI.

Hanhart imp.
431.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



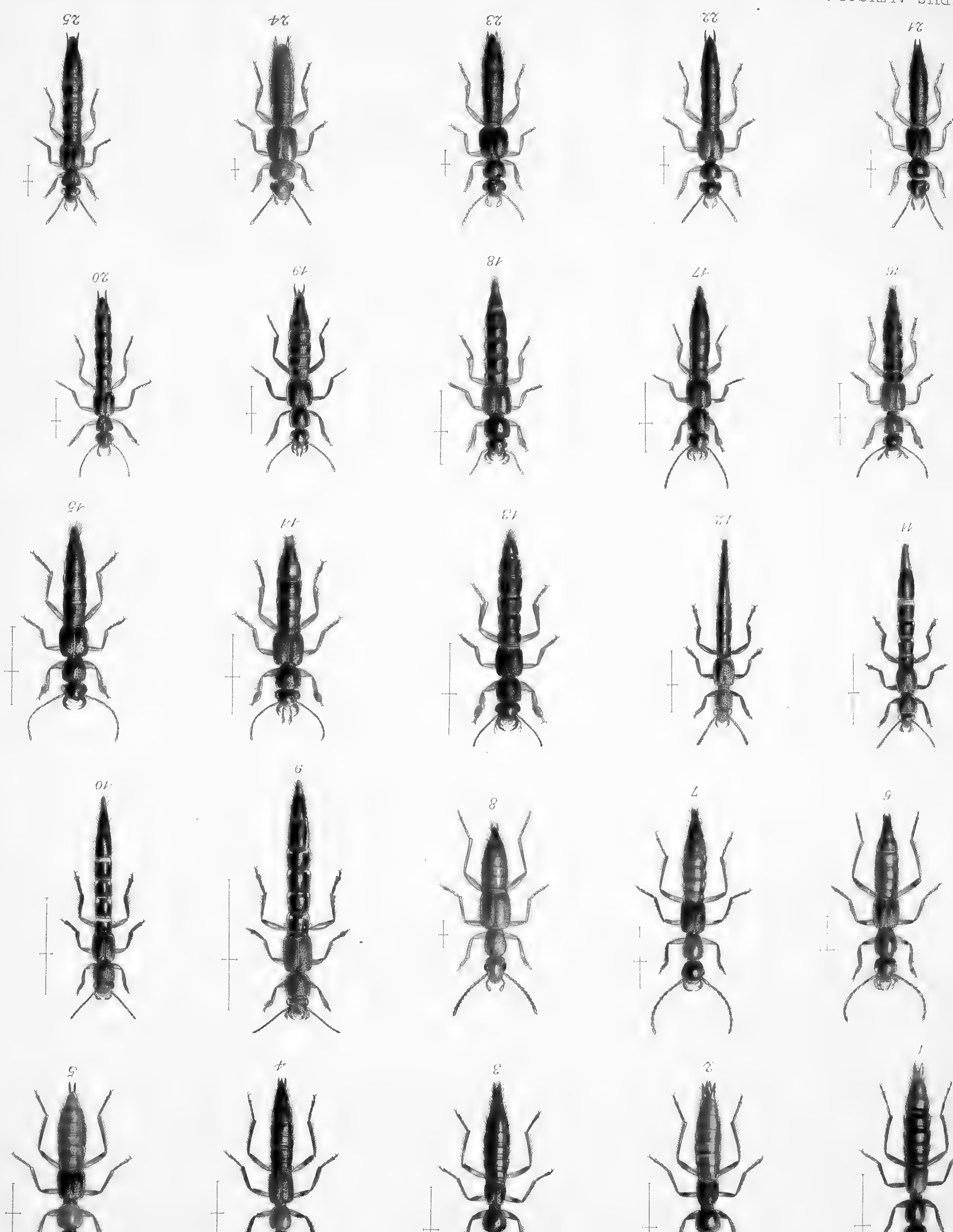
1 PEDERUS ALTICOLA .
2 " LURIDIVENTRIS .
3 " LAETIPES .
4 " SIGNATICORNIS .
5 " LAETUS .
6 " YUCATECA .
7 " COLUMBINUS .
8 " APICALIS .

W.Durkiss lith.

9 TANODEMA STIGMATICUM .
10 " ORNATUM .
11 " HAEMORRHOIDALE .
12 " TIBIALE .
13 PINOPHILUS ALBIPES .
14 " PENETRANS .
15 " LONGICORNIS .
16 " AGILIS .
17 LATHROPINUS PARALLELUS .

18 HETEROLEUCUS MARGINATUS .
19 GEODACTYLUS FAUVELI .
20 PALAMINUS LACERTINUS .
21 " CONCOLOR .
22 " RUBRIPENNIS .
23 " APICIPENNIS .
24 " DEFORMIS .
25 " VITTATUS .

Hanhart imp.
433.



Lond. Entr. Soc.

Coleoptera. Tab. I. Fig. 2. Table of.

Inches 1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Centimetres
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak
LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

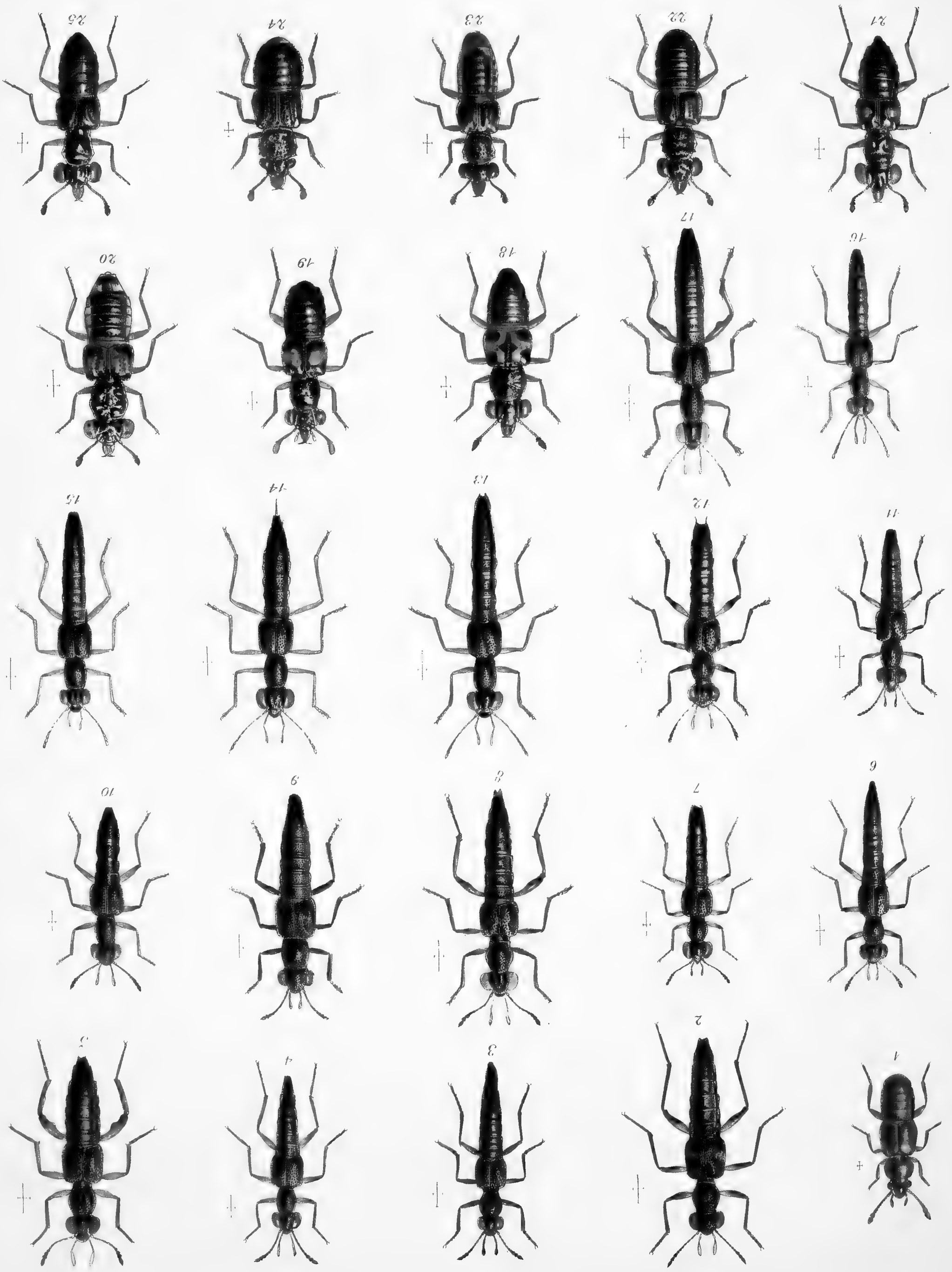
1 EDAPHUS EUPLECTOIDES.
2 STENUS REINEER.
3 " CHAMPIONI.
4♀ " GRACILIVENTRIS.
5♂ " REPLETUS.
6♀ " FAUVELIANUS.
7♂ " NASUTUS.
8♂ " TROCHANTERINUS.

WPuckiss lith

9 STENUS CONSIMILIS.
10 " DOCILIS.
11 " GENTILIS.
12 " SALVINI.
13 " GODMANI.
14♂ " ACULEATUS.
15 " CRIBRICEPS.
16 " SAGAX.
17 " PODAGRICUS.

18 MEGALOPS CRUCIGER.
19 " INTEGER.
20 " ELEGANS.
21 " PRAEDITUS.
22 " GUATEMALENSIS.
23 " BASALIS.
24 " PEPLOIDES.
25 " PUNCTICEPS.

Hanhart imp
439.



Coleoptera. Pl. 192. 2. Vol. 17

Gleed Lith. Edin.

Biol. Centr.-Am.

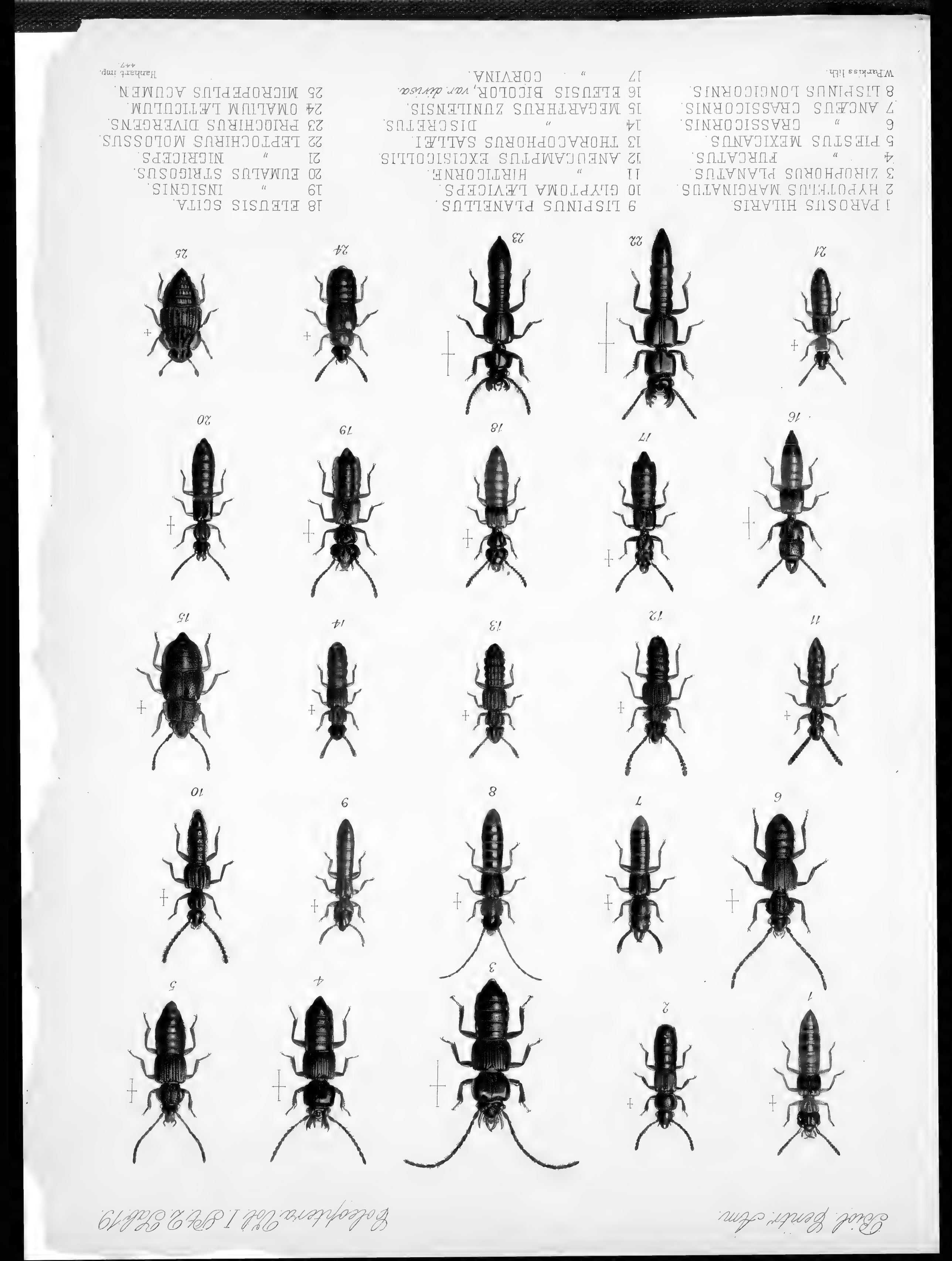
Coleoptera. Vol. I. Pt. 2. Tab. 18.

1 OXYPORUS MEXICANUS.
2 " FLOHRI.
3 OSORIUS CANALICULATUS.
4 " MUNDUS.
5 HOLOTROCHUS RUFOPYGUS.
6 " MARGINATUS.
7 BLEDIUS LECONTEI.
8 " INORNATUS.
9 PLATYSTETHUS SPICULUS.
10♂ OXYTELUS PRINCIPALIS.
11♂ " SPINIFRONS.
12 " STRIGOSULUS.
13 APOCELLUS SPHÆRICOLLIS.
14 " COGNATUS.
15 " SORDIDUS.
16 TROGOPHLŒUS PLANELLUS.
17 " PUNCTIPENNIS.
18 TROGOPHLŒUS MOLLIS.
19 " VITTATUS.
20 TROGACTUS FUNEBRIS.
21 " GODMANI.
22 THINOBIUS TENUIS.
23 SCIOTROGUS OPACUS.
24 ECBLETUS SIMPLEX.
25 CHARHYPHUS BREVICOLLIS.

W.Purkiss lith.

Hanhart imp.
442.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black



1 PAROSUS HILARIS.
2 HYPOTHELUS MARGINATUS.
3 ZIROPHORUS PLANATUS.
4 " FURCATUS.
5 PIESTUS MEXICANUS.
6 " CRASSICORNIS.
7 ANCÆUS CRASSICORNIS.
8 LISPINUS LONGICORNIS.
9 LISPINUS PLANELLUS.
10 GLYPTOMA LÆVICEPS.
11 " HIRTICORNE.
12 ANEUCAMPTUS EXCISICOLLIS.
13 THORACOPHORUS SALLEI.
14 " DISCRETUS.
15 MEGARTHRUS ZUNILENSIS.
16 ELEUSIS BICOLOR, *var. dayisa.*
17 " CORVINA.
18 ELEUSIS SCITA.
19 " INSIGNIS.
20 EUMALUS STRIGOSUS.
21 " NIGRICEPS.
22 LEPTOCHIRUS MOLOSSUS.
23 PRIOCHIRUS DIVERGENS.
24 OMALIUM LÆTICULUM.
25 MICROPELUS ACUMEN.

WPurkiss lith.

Hanhart imp.
447.

Biol. Centr.-Am.

Coleoptera. Vol. I. Pl. 2. Staph.